

HYMENOPTERA TEXANA.

BY E. T. CRESSON.

The present memoir is intended to contain a list of all the species of hymenoptera known to me from Texas, excepting those belonging to the families Chrysididæ, Formicidæ and the smaller Chalcididæ, which have not been studied.

Besides the material in the collection of this Society, I have had placed at my disposal for determination and study, the splendid collection of Mr. G. W. BELFRAGE, made in Bosque Co., the fine collection in the Museum of Comparative Zoölogy at Cambridge, Mass., made by Mr. J. Boll, in Dallas Co., and a small collection of Mr. L. HEILIG-BRODT, made in Travis and Bastrop Counties. To these gentlemen, and also to Dr. H. HAGEN, of the Cambridge Museum, I feel greatly indebted for the valuable assistance they have rendered me in the preparation of this work.

Of the nineteen families studied in this paper, over six hundred species are enumerated, nearly three hundred of which appear to be new, and are herein described.

Unless otherwise indicated, the types of the new species are to be found in the collection of the American Entomological Society, which has been considerably enriched by liberal donations made by the above named gentlemen.

TENTHREDINIDÆ.***Cimbex americana*, var. *Ulmi*.**

Cimbex americana, Leach, Zool. Miscel. iii. p. 104; Norton, Trans, Am. Ent. Soc. i., p. 40.

One ♂ specimen. (Boll.)

***Abia Kennicotti*.**

Abia Kennicotti, Norton, Trans. Am. Ent. Soc. i., p. 47; iv. p. 77.

One ♂ specimen. (Belfrage.)

Acordulecera dorsalis.

Acordulecera dorsalis, Say, Bost. Jour. Nat. Hist. i., p. 200.

Three ♂ ♀ specimens. (Belfrage.)

Ptenos texanus.

Ptilia texana, Norton, Trans. Am. Ent. Soc. ii., p. 367.

Ptenos texana, Norton, Trans. Am. Ent. Soc. iv., p. 77.

Ten ♂ ♀ specimens. (Belfrage.)

Ptenos niger.

Ptenos niger, Norton, Trans. Am. Ent. Soc. iv., p. 77.

Nine ♂ specimens. (Belfrage.)

Ptenos nigropectus.

Ptenos nigropectus, Norton, Trans. Am. Ent. Soc. iv., p. 77.

Six ♂ ♀ specimens. (Belfrage.)

Hylotoma abdominalis.

Hylotoma abdominalis, Leach, Zool. Misc. iii., p. 123; Norton, Trans. Am. Ent. Soc. i., p. 66.

One ♀ specimen. (Belfrage.)

Hylotoma miniata.

Hylotoma miniata, Klug, Berl. Mag. vi., p. 298. Norton, Trans. Am. Ent. Soc. i. p. 70.

Three specimens. (Belfrage; Boll.)

Hylotoma rubiginosa.

Hylotoma rubiginosa, Beauv. Ins., p. 98, pl. ix. fig. 5. Norton, Trans. Am. Ent. Soc. i., p. 72.

One ♀ specimen. (Belfrage.) The legs of this specimen are entirely black.

Nematus chloreus.

Nematus chloreus, Norton, Trans. Am. Ent. Soc. i., p. 224; iv., p. 80.

One ♀ specimen. (Belfrage.)

Euphytus Bollii.

Euphytus Bollii, Norton, Trans. Am. Ent. Soc. iv., p. 80.

One ♀ specimen. (Boll. Mus. Comp. Zool.)

Hemichroa albidovariata.

Hemichroa albidovariata, Norton, Trans. Am. Ent. Soc. iv., p. 81.

Two ♀ specimens. (Belfrage.)

Hemichroa fraternalis.

Hemichroa fraternalis, Norton, Trans. Am. Ent. Soc. iv., p. 81.

One ♂ specimen. (Coll. G. W. Belfrage.)

Selandria inaequidens.

Selandria inaequidens, Norton, Trans. Am. Ent. Soc. iv., p. 84.

Two ♀ specimens. (Belfrage.)

Selandria albicollis.

Selandria albicollis, Norton, Trans. Am. Ent. Soc. iv. p. 85.

One ♂ specimen. (Belfrage.)

Macrophya excavata.

Allantus excavatus, Norton Proc. Ent. Soc. Phil. i., p. 143.

Macrophya excavata, Norton, Trans. Am. Ent. Soc. i. p. 266; iv. p. 86.

One ♀ specimen. (Belfrage.)

Tenthredo nimbipennis, Norton.

♀.—Deep black, smooth and polished, much slenderer than *atroviolaceus*; mandibles with a large white spot, tips reddish; antennæ longer than head and thorax, slender; wings large, blackish, strongly violaceous, apex paler; legs slender, anterior knees within, their tibiæ within, and the four anterior tarsi more or less except tips of joints, pale luteous; abdomen long, flattened, subfusiform, apex obtusely pointed. Length .50—.55 inch.

Three specimens. (Belfrage.)

Lophyrus Abietis.

Lophyrus Abietis, Harris, Treatise on Insects, p. 376.

One ♀ specimen. (Boll.)

Lophyrus fulva.

Lophyrus fulva, Norton, Trans. Am. Ent. Soc. iv., p. 86.

One ♀ specimen from Comal Co.

Xyela ferruginea.

Xyela ferruginea, Say, Long's 2d Exped. ii., p. 310. Norton, Trans. Am. Ent. Soc. ii., p. 349.

One ♀ specimen. (Boll.)

Xyela aenea.

Xyela aenea, Norton, Trans. Am. Ent. Soc. iv. p. 86.

Five ♂ specimens. (Belfrage.)

Tremex columba.

Sirex columba, Fabr. Syst. Ent., p. 325.

Tremex columba, Drury, Ins. ii., p. 78. Norton, Trans. Am. Ent. Soc. ii., p. 364.

Three ♂ ♀ specimens. (Belfrage; Boll.)

ICHNEUMONIDÆ.

Ichneumon viola.

Ichneumon viola, Cress. Proc. Ent. Soc. Phil. iii., p. 137.

One ♀ specimen. (Belfrage.)

Ichneumon subcyanens.

Ichneumon subcyanens, Cress. Proc. Ent. Soc. Phil. iii. p. 148.

One ♀ specimen. (Belfrage.)

Ichneumon agnitus.

Ichneumon agnitus, Cress. Proc. Ent. Soc. Phil. iii., p. 151.

One ♀ specimen. (Boll.)

Ichneumon cæruleus.

Ichneumon cæruleus, Cress. Proc. Ent. Soc. Phil. iii., p. 149.

One ♀ specimen. (Belfrage.)

Ichneumon zebratus.

Ichneumon zebratus, Cress. Trans. Am. Ent. Soc. i., p. 299 ♀.

♂.—Differs from the ♀ as follows:—The entire face beneath antennæ is pale lemon-yellow; antennæ entirely black, except scape beneath which is pale yellow; posterior tibiæ have the apical half black, and the basal half whitish, as well as the bases of their tarsi.

One ♂ specimen. (Boll.) A very handsome species.

Ichneumon comptus.

Ichneumon comptus, Say, Bost. Journ. Nat. Hist. i., p. 229.

One ♂ specimen. (Boll.)

Ichneumon insolens.

Ichneumon insolens, Cress. Trans. Am. Ent. Soc. i., p. 302.

Two ♂ specimens. (Boll; Heiligbrodt.)

Ichneumon Belfragei, n. sp.

♂.—Deep black, shining; sides of face and of clypeus, dot on tegulæ anteriorly, short line beneath, and the scutellum, white; mesothorax with rather close, deep punctures; scutellum subconvex; metathorax opaque, with well defined carinæ, central area lunate; wings uniformly pale fuliginous, nervures and stigma black, areolet triangular; anterior tibiæ pale in front; abdomen shining, closely punctured; second, third and base of fourth segments yellowish-ferruginous. Length .50 inch.

One specimen. (Coll. G. W. Belfrage.) Closely allied to *electus*, Cress.

Ichneumon trogiformis.

Ichneumon trogiformis, Cress. Proc. Ent. Soc. Phil. iii., p. 175.

Four ♂ ♀ specimens. (Belfrage; Boll.)

Ichneumon propitius, n. sp.

♂.—Yellowish-ferruginous or honey-yellow; face, clypeus, mandibles and anterior orbits, pale yellow; antennæ long, pale ferruginous beneath, blackish above, with a broad yellowish-white annulus above the middle, scape pale beneath; prothorax blackish anteriorly, the anterior margin pale yellow; margins of mesothorax blackish, as well as entire scutellar region and anterior and posterior margins of pleura and centrally beneath; scutellum yellow, convex, shining; metathorax blackish at apex, carinæ sharply defined, a short subacute spine on each side, central area quadrate, extending to base; wings hyaline, iridescent, nervures and stigma fuscous, areolet triangular; legs slender, four anterior coxæ yellowish beneath, apices of posterior pair, tips of their femora, apical half of their tibiæ and tips of their tarsi black, basal half of their tibiæ yellow; abdomen opaque, densely sculptured, base of first segment and extreme apical margins of second and third segments black and shining. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.) Closely resembles some of

the varieties of *instabilis*, Cress., but is much smaller and with the antennæ and legs differently colored.

***Ichneumon rubicundus*.**

Ichneumon rubicundus, Cress. Proc. Ent. Soc. Phil. iii., p. 176.

Three ♂ ♀ specimens. (Belfrage.)

***Trogus obsidianator*.**

Trogus obsidianator, Brullé, Hym., p. 299.

One ♂ specimen. (Boll.)

***Cryptus laticeps*, n. sp.**

♂.—Black; head broader than thorax; face broad, with a cuneiform mark on each side, two dots on the middle, clypeus, mandibles except tips, dot beneath eyes, palpi, scape beneath, anterior margin of prothorax, tegulæ, short line beneath, and the scutellum, all white; metathorax rugulose, with sharply defined carinæ; wings hyaline, stigma black, areolet rather large, pentagonal; legs, including coxæ, pale ferruginous, anterior coxæ and trochanters pale, tips of posterior femora, their tibiæ and tarsi blackish; abdomen very slender at base, apical segment with a white spot at tip above, and preceding segment with a narrow apical white line. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.)

***Cryptus americanus*.**

Cryptus americanus, Cress. Proc. Ent. Soc. Phil. iii., p. 297.

One ♀ specimen. (Heiligbrodt.)

***Cryptus exulans*, n. sp.**

♂.—Black, subopaque, densely punctured, covered with a short thin pale pubescence; head small, eyes prominent, apical margin of clypeus deeply constricted, shining; antennæ long, joints 9—12 white above; thorax less densely punctured than head, somewhat shining; scutellum convex, shining; metathorax large, rugose, posterior face obliquely flattened, a transverse subarcuate carina near base and a short oblique one on each side of posterior face; wings uniformly smoky-hyaline, nervures black, areolet broad 5-angular, side nervures parallel; legs black, pale sericeous, anterior tibiæ more or less pale, second and following joints of posterior tarsi white; abdomen polished, rufocastaneous, first segment long, slender, arcuated, apex slightly dilated and convex above, the stigmata not prominent, third and following segments with a short thin appressed pale pubescence. Length .50 inch.

One specimen from Comal Co. Resembles *americanus*, Cress.

***Cryptus extrematis*.**

Cryptus extrematis, Cress. Proc. Ent. Soc. Phil. iii., p. 304.

One ♀ specimen. (Belfrage.)

***Cryptus nuncius*.**

Cryptus nuncius, Say, Bost. Journ. Nat. Hist. i., p. 237.

Several ♂ ♀ specimens. (Belfrage; Boll.) Mr. Belfrage hatched, in October, 120 ♂ ♀ specimens of this species from a pupa of *Telega polyphemus*.

Cryptus incertus.

Cryptus incertus, Cress. Proc. Ent. Soc. Phil. iii., p. 306.

One ♀ specimen. (Belfrage.) Differs from the type only by the second abdominal segment having a transverse impressed line near the base, which may be an imperfection.

Cryptus albicollaris.

♀.—Pale ferruginous; head black, anterior orbits, clypeus, spot beneath eyes, spot on mandibles and basal joint of palpi, white; antennæ slender, black, with a broad, median, white annulus; anterior margin of prothorax broadly white, a black spot on each side; two longitudinal stripes on mesothorax, confluent behind, and scutellar region, black; tegulæ, spot beneath, scutellum and postscutellum, white; metathorax with two transverse sinuate carinæ, and a minute subacute lateral tubercle; wings hyaline, slightly dusky at tips, areolet moderate, 5-angular, side nervures nearly straight, making the cell nearly quadrate; tarsi whitish, dusky at tips; three apical segments of abdomen black; ovipositor longer than abdomen. Length .42 inch.

One specimen from Comal Co. Closely allied to *atricollaris*, Walsh, differing principally by the abdomen being black at tip.

Cryptus calipterus, Say, Bost. Journ. Nat. Hist. i., p. 234.

♀.—Ferruginous; head not wider than thorax, narrowed beneath eyes; clypeus transverse, convex at base, depressed at tip; mandibles bifid and black at tip; antennæ rather slender, ferruginous, apical third black, joints 3—6 long, subequal; metathorax broadly truncate and subexcavated behind, with a rather prominent lateral carina; wings yellow, a broad black or fuliginous band a little before middle, and a broad band of same color covering apical third, enclosing an elongate triangular yellow spot; posterior wings with two black or fuliginous bands; four anterior legs pale ferruginous, posterior tibiæ black at tips; abdomen oblong-ovate, first segment rather suddenly dilated at apex, third segment with a narrow black band at base; ovipositor longer than abdomen, sheaths black. Length .47—.55 inch.

♂.—Elongate, slender, rather paler than ♀; face yellowish; a transverse mark behind insertion of antennæ and a spot inclosing ocelli, black; antennæ long, porrect, fulvo-ferruginous, slightly dusky at apex; posterior tibiæ black, with basal third pale yellow, as well as their tarsi which are dusky at tips; abdomen long, slender, shining, thickened towards apex, first segment slender. Length .40—.65 inch.

Several ♂ ♀ specimens examined. (Belfrage; Boll; Heiligbrodt.) This and the two following species so closely resemble each other that they may easily be confounded; but upon careful comparison they are easily separated. *Calipterus* is distinguished by the antennæ having no pale annulus, by the posterior wing having *two* fuliginous bands, and by the sheaths of ovipositor being black.

Cryptus sororius, n. sp.

♂.—Differs from *calipterus* as follows:—Thorax shorter, more robust and more gibbous; head broader, face shorter, median swelling more prominent; antennæ with a yellow, not well defined, annulus about the middle; areolet of anterior wing more pentagonal than quadrangular; posterior wings yellow, with apex only fuscous; legs and abdomen more robust, first segment of latter much broader at apex; ovipositor shorter, the sheaths concolorous with abdomen. Length .47 inch.

Two specimens. (Belfrage.) Easily distinguished from *calipterus* by the more robust form, by the shape of areolet and by the color of posterior wing and sheaths of ovipositor.

Cryptus buccatus, n. sp.

♀.—Differs from *calipterus* ♀ as follows:—Head broader than thorax, subquadrate, cheeks swollen; clypeus flat and very transverse, apex truncate; mandibles pointed, not bifid; antennæ shorter and more robust, with joints short and compact, joints 8—11 lemon-yellow above; metathorax scarcely truncate behind, with lateral carina subobsolete; areolet smaller, 5-angular; posterior wing yellow, with apex and posterior margin fuliginous; posterior tibiæ not black at tips; first abdominal segment gradually, not suddenly, dilated to apex; sheaths of ovipositor pale fulvous. Length .50—.58 inch.

♂.—Differs from *calipterus* ♂ as follows:—Head larger and buccate; antennæ black, with a fulvous annulus beyond middle; the triangular yellow spot beyond stigma on anterior wing much reduced; posterior wing yellow only at base and on costal margin; legs darker in color, posterior femora and tibiæ uniformly reddish-brown, the latter with a yellowish sericeous pile; tarsi luteous, with fuscous incisures, terminal joint rufous; abdomen shorter, more robust and subclavate, apex more or less blackish. Length .55 inch.

Several ♂ ♀ specimens. (Belfrage.) Easily distinguished from either of the preceding species by the large, subquadrate head, swollen cheeks and short, more robust antennæ.

Cryptus comalensis, n. sp.

♀.—Head and thorax dull ferruginous, opaque, abdomen paler; minutely sculptured; antennæ blackish above, with a rather broad yellowish annulus about the middle; metathorax abrupt behind, the posterior face transversely rugose, above finely sculptured, with two transverse, sinuate, rather indistinct carinæ; wings dark fuscous, slightly violaceous, areolet rather small, 5-angular; legs ferruginous, tarsi paler, coxæ and trochanters fuscous; first abdominal segment smooth and shining, apex broadly dilated, with prominent lateral tubercles; basal margin of second segment narrowly black, the third with a black band occupying the basal fourth of the segment; ovipositor about one-half the length of abdomen, piceous, sheaths ferruginous. Length .50 inch.

One specimen collected in Comal Co.

Joppidium rubriceps, Walsh, MS.

♀.—Deep black, smooth and polished; head ferruginous, face paler; antennæ citron yellow, scape reddish, flagellum blackish at tips; tegulæ brown; metathorax rugose, sparsely pubescent laterally; prothorax sometimes tinged with reddish-brown; wings broad, blackish-fuliginous, with a strong æneous reflection, areolet large, quadrate; four anterior legs honey-yellow, femora darker towards base, coxæ black, trochanters piceous, posterior legs black, their tarsi yellow, dusky at tips; abdomen slender at base, gradually dilated towards apex, which is sometimes tinged with brownish; ovipositor more than half the length of abdomen. Length .55 inch.

♂.—Much more slender; vertex and occiput black; antennæ long, bright citron yellow, tips of flagellum dusky; bases of intermediate femora black, intermediate tarsi dusky; abdomen very slender, especially at base, smooth and polished. Length .50 inch.

Four ♂ ♀ specimens. (Belfrage; Boll.)

Joppidium apicale, n. sp.

♀.—Head dull rufous, blackish at base of antennæ, which are yellowish, darker at base and black on apical third; thorax entirely black, except a dull rufous spot on each side of prothorax anteriorly; tegulæ pale; metathorax rounded, deeply punctured, pubescent; wings blackish-violaceous; coxæ, posterior trochanters and femora black, remainder of legs yellowish-ferruginous, posterior tibiæ and tarsi paler; abdomen shining, ferruginous, first and second segments, except narrow apical margin, black, base of third segment blackish; ovipositor about one-half the length of abdomen. Length .45 inch.

One specimen collected in Comal Co. Quite distinct from *rubriceps* by the color of the legs and abdomen.

Phygadeuon texanus, n. sp.

♂.—Black, head and thorax with short, pale pubescence; mandibles rufopiceous, palpi whitish; antennæ black above, brown beneath, scape yellow beneath; thorax shining, with sparse, not deep, punctures; metathorax very rough and uneven, with sharply defined carinæ, posterior face deeply excavated, lateral angles very prominent and obtuse; tegulæ rufo-piceous; wings hyaline, faintly tinged with yellowish, areolet 5-angular; legs honey-yellow; four anterior coxæ at base and posterior pair except tips, black; four anterior coxæ beneath, tips of posterior pair, anterior trochanters, two posterior pair except dusky spot above, and four anterior tibiæ and tarsi, whitish; posterior tibiæ pale, bases and tips dusky, their tarsi blackish; abdomen smooth, shining, ferruginous or rufo-ferruginous; first segment above with two sharply defined longitudinal carinæ, becoming obsolete before reaching apex, which is considerably dilated, sometimes the base of this segment is more or less blackish; apex of abdomen pale ferruginous. Length .28—.33 inch.

Seven ♂ specimens collected in Comal Co.

Phygadeuon intermedius, n. sp.

♀.—Subrobust; head and thorax black, abdomen and legs ferruginous, smooth and shining; spot on mandibles and palpi pale; antennæ fusco-ferruginous, paler at base, incisures of joints dusky, scape swollen, three basal joints of flagellum about equal in length, each being nearly as long as scape,

remaining joints very short; metathorax truncate behind, posterior face concave, lateral angles prominent; tegulæ pale; wings hyaline, areolet rather large, 5-angular, the upper apical nervure hyaline; legs subrobust, and including the coxæ entirely ferruginous; abdomen rather broad, ovate, smooth and shining, first segment black at base, broadly dilated at apex; ovipositor about three-fourths the length of abdomen. Length .20 inch.

Two specimens. (Belfrage.) This species seems to be intermediate between *vulgaris*, Cress., and *pusillus*, Cress., being less robust than the former, and more robust than the latter; in coloration it resembles both species.

Phygadenon timidus, n. sp.

♂.—Slender, shining; head, antennæ and thorax black; palpi pale; most of mandibles and scape beneath ferruginous; antennæ long, slender; metathorax rounded, with distinct elevated lines, forming a large central area, and with small acute lateral tubercles; tegulæ pale; wings hyaline, areolet small, irregularly 5-angular; legs, including coxæ, pale ferruginous, bases and tips of posterior tibiæ, their tarsi and tips of four anterior tarsi black; abdomen slender, first segment long, narrow, black, longitudinally aciculated; second segment blackish ferruginous on disk and narrowly so at apex; third segment entirely and most of fourth and fifth ferruginous; sides of the latter and the apical segments black. Length .20 inch.

One specimen. (Coll. G. W. Belfrage.) This may possibly be the male of the preceding species.

Hemiteles conspicuus, n. sp.

♀.—Ferruginous; apex of antennæ and tips of mandibles blackish; scutellum gibbous; pleura finely rugulose; metathorax unarmed, rugulose, with tolerably well defined longitudinal elevated lines, apex truncate, sides with sparse, short, pale pubescence; wings shorter than usual, hyaline, anterior pair with three fuscous bands, viz.: a narrow one at base of first submarginal cell, a very broad one extending from base of stigma nearly to apex of marginal cell and rounded beneath, the third one narrowly margining the apex; areolet marked by a hyaline spot, second recurrent nervure nearly straight; posterior wings hyaline, apex fuscous; legs long, slender, concolorous with body; abdomen petiolate, depressed, fuscous towards apex; three basal segments finely longitudinally aciculated, the fourth smooth and shining; apical segments with pale pubescence; first segment broadly dilated at apex; ovipositor about one-half the length of abdomen. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.) A very handsome and conspicuous species; the broad middle band on anterior wing has a rounded appearance.

Hemiteles utilis.

Hemiteles utilis, Norton, Trans. Am. Ent. Soc. ii., p. 326.

One ♀ specimen. (Belfrage.)

Pezomachus texanus.

Pezomachus texanus, Cress. Can. Ent. iv., p. 64.

Two ♀ specimens. (Belfrage.)

Mesostenus introitus, n. sp.

♂.—Slender, black; face, anterior orbits, suddenly dilated on each side of lower ocellus, broad posterior orbits, clypeus, labrum, mandibles except tips, and palpi white; antennæ long, slender, black, with rather narrow white annulus, indistinct beneath; collar, spot on disk of mesothorax, tegulæ, spot before, short line beneath, spot before each intermediate coxæ, scutellum, a line on each side anteriorly, postscutellum, large spot behind posterior wing, and a large spot on metathorax above, occupying the apical three-fourths, white or yellowish-white; wings hyaline, dusky at apex, areolet minute, quadrate; legs long, slender, honey-yellow; four anterior coxæ, anterior trochanters and spot on posterior coxæ behind, pale yellow; posterior trochanters above, apices of their tibiæ, and their tarsi, except second and third joints (which are white), black; tips of four anterior tarsi dusky; abdomen long, narrow, with basal half of first segment and a rather narrow continuous band at apex of all the segments except the last, yellowish-white, terminal segment with a whitish spot. Length .40 inch.

One specimen. (Coll. G. W. Belfrage.)

Mesostenus discoidalis, n. sp.

♀.—Black, shining; eyes large and prominent; orbits, broad on cheeks, face, spot on mandibles, and palpi, white; clypeus convex, tinged with honey-yellow; antennæ as long as body, slender, black; scape beneath and a very broad annulus on flagellum, white; collar, upper margin of prothorax, discal spot on mesothorax, scutellum, band behind postscutellum, tegulæ, dot beneath, pleura except broad anterior margin, flanks of metathorax and a large mark above, enclosing at apex a black spot, whitish; metathorax with a transverse carina before middle, posterior face transversely wrinkled; wings hyaline, areolet very minute, quadrate; legs long and slender, pale honey-yellow, four anterior coxæ and anterior pair of trochanters whitish, with an exterior dusky stripe; posterior coxæ with an exterior black stripe: extreme apex of posterior tibiæ, including spurs, and basal fourth of first joint, black; remainder of posterior tarsi pure white; abdomen slender, polished, first segment white with a median black band, remaining segments black with a continuous apical white band; ovipositor half the length of abdomen. Length .38 inch.

One specimen. (Coll. G. W. Belfrage.)

Mesostenus paludatus, n. sp.

♂.—Head and thorax black; all beneath antennæ, anterior orbits, space beneath eyes, mandibles except tips, palpi and scape beneath, yellowish-white: head narrow, scarcely wider than thorax, face broad, clypeus with no distinct basal suture, mandibles broad; antennæ nearly as long as body, slender, black above, the scape short and subglobose, flagellum pale fulvous beneath; mesothorax deeply punctured, with the longitudinal lines deeply impressed; collar, upper lateral margin of prothorax, discal spot on mesothorax, scutellum, tegulæ, line beneath and pleura beneath, white; metathorax very uneven, obliquely truncate behind, with prominent lateral angles, ferruginous laterally, black at base and centrally, whitish down each lateral carina, a smooth, shining, quadrate central area, before which is a sharply defined transverse carina; wings hyaline, iridescent, areolet minute, quadrate; legs honey-yellow; four anterior coxæ, anterior trochanters and joints 2—4 of posterior tarsi,

white; extreme tips of posterior femora, apical third of their tibiæ, and first and last tarsal joints, black; abdomen narrow, shining, ferruginous, the three apical segments black. Length .35 inch.

One specimen from Comal Co. A very distinct species.

Mesostenus dejectus, n. sp.

♀.—Head and thorax dull black, legs and abdomen dull ferruginous: anterior margin of labrum white; mandibles piceous; palpi pale; antennæ black, with joints 8—10 white above; mesothorax densely, rather finely punctured, surface even; scutellum shining, subconvex; metathorax coarsely rugose, with a prominent, obtuse, whitish, lateral tubercle, and a well defined, transverse carina near base, before which the surface is much less coarsely sculptured; wings fusco-hyaline, areolet subquadrate, apical nervure obsolete; legs and abdomen uniformly ferruginous, the latter subsericeous, first segment shining and broadly dilated at apex; ovipositor not more than half the length of abdomen. Length .50 inch.

Two specimens from Comal Co.

Mesostenus thoracicus.

Mesostenus thoracicus, Cress. Proc. Ent. Soc. Phil. iii., p. 314.

One ♀ specimen. (Belfrage.)

Mesostenus gracilis.

Mesostenus gracilis, Cress. Proc. Ent. Soc. Phil. iii., p. 314.

One ♂ specimen. (Belfrage.)

Mesostenus pertinax, n. sp.

♀.—Head, pro- and mesothorax and anterior portion of pleura black: orbits, broad on cheeks, face except a median black dot, clypeus, mandibles except tips, palpi, upper lateral margin of prothorax, two abbreviated lines on disk of mesothorax, scutellum, postscutellum, tegulæ, and three spots on pleura, the lower one large and oblique, white; metathorax and posterior part of pleura, honey-yellow; a large triangular mark behind each posterior wing, a spot on flanks of metathorax, and a broad, almost circular, line on posterior face, white; pleura beneath pale honey-yellow; antennæ slender, blackish above, with a narrow whitish annulus, beneath pale on basal half; mesothorax with middle lobe rather prominent; metathorax with posterior face transversely wrinkled and with short obtuse lateral tubercles; wings hyaline, faintly dusky at extreme tips, areolet small, 5-angular, apical nervure hyaline; legs honey yellow, anterior coxæ and trochanters whitish, posterior tarsi whitish between base and apex; abdomen entirely honey-yellow or pale ferruginous, smooth and shining; ovipositor very short. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.) Allied to *thoracicus* and *gracilis*.

Mesostenus arvalis, n. sp.

♀.—Honey-yellow, vertex, occiput and mesothorax more or less, tinged with fuscous; face and orbits whitish; antennæ black, with a narrow white annulus about midway, scape pale beneath; prothorax pale with whitish margins and a transverse black band behind the head; mesothorax with deeply impressed lines; pleura pale, with indistinct whitish spots; tegulæ whitish;

metathorax with indistinct elevated lines and very prominent obtuse lateral tubercles which are white, posterior face concave and transversely wrinkled; wings hyaline, areolet small, quadrate, apical nervure hyaline; legs uniformly honey-yellow, anterior coxæ and joints 2 and 3 of posterior tarsi whitish; apical segment of abdomen with a white spot. Length .35 inch.

Three specimens. (Belfrage.)

Mesostenus longicaudis, n. sp.

♀.—Slender, uniformly ferruginous, shining; antennæ long and slender, black, with part of joints 7 and 8 white above, three basal joints ferruginous; middle lobe of mesothorax convex and prominent; metathorax rounded, depressed on posterior face, rugulose, a well defined arcuate carina near base, enclosing on each side at base a smooth space; wings fusco-hyaline, areolet very narrow longitudinally; legs long and very slender, posterior tarsi slightly dusky; abdomen long, slender polished; ovipositor more than twice the length of body, pale ferruginous, sheaths black. Length of body .40 inch, of ovipositor one inch.

One specimen. (Coll. G. W. Belfrage.) A very remarkable species.

Arotes decorus.

Acænitus decorus, Say, Bost. Journ. Nat. Hist. i., p. 248 ♀.

One ♂ specimen. (Boll.)

Thalessa lunator.

Pimpla lunator, Fabr. Ent. Syst. ii., p. 162.

Three ♂ ♀ specimens. (Belfrage; Boll.)

Ephialtes tuberculatus.

Ichneumon tuberculatus, Fourer. Grav. Ich. Eur. iii., p. 228.

One ♀ specimen. (Belfrage.)

Pimpla maura.

Pimpla maura, Cress. Trans. Am. Ent. Soc. iii., p. 145.

Two ♀ specimens from Comal Co.

Pimpla texana.

Pimpla texana, Cress. Trans. Am. Ent. Soc. iii., p. 145.

One ♀ specimen from Comal Co.

Pimpla tenuicornis.

Pimpla tenuicornis, Cress. Proc. Ent. Soc. Phil. iv., p. 267.

One ♀ specimen from Comal Co.

Pimpla annulipes.

Pimpla annulipes, Brullé. Hym., p. 102.

Three ♂ ♀ specimens. (Belfrage.)

Pimpla indagatrix.

Pimpla indagatrix, Walsh, Trans. Am. Ent. Soc., iii., p. 146.

Two ♂ specimens. (Belfrage.)

Pimpla conquisitor.

Pimpla conquisitor, Say, Bost. Journ. Nat. Hist. i., p. 232.

Three ♀ specimens. (Belfrage.)

Pimpla inquisitor.

Pimpla inquisitor, Say, Contrib. Macl. Lyc. i., p. 71.

One ♀ specimen. (Belfrage.)

Pimpla notanda.

Pimpla notanda, Cress. Trans. Am. Ent. Soc. iii., p. 148.

Two ♀ specimens. (Belfrage.)

***Pimpla sanguinipes*, n. sp.**

♀.—Black, head and thorax closely and finely punctured; metathorax finely pubescent, opaque and finely rugose, transversely striated medially; antennæ slender, setaceous, piceous; tegulæ black; wings subhyaline, nervures and stigma black, the latter pale at base, areolet subrhomboidal; legs robust and, including coxæ, sanguineous, four posterior tarsi more or less obfuscated; abdomen robust, densely and coarsely punctured, except narrow apical margins and two or three apical segments which are smooth and shining; ovipositor about half the length of abdomen. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.) Easily distinguished from all the other known N. A. species by the legs being entirely bright red.

***Pimpla petulea*, n. sp.**

♀.—Long, slender, black, shining, feebly punctured; mandibles brown with a white spot on each; palpi white; antennæ short, brown-black above, brown beneath, whitish towards base; sides of mesothorax, scutellum and pleura, except anterior margin, sanguineous; tegulæ and short line before, white; wings hyaline, nervules and stigma fuscus, the latter pale at base, areolet subrhomboidal; legs slender, two anterior pairs, including coxæ, white; their femora above fulvous, their tibiæ at tips and apex of tarsal joints blackish; posterior coxæ and femora bright fulvous, their trochanters and knees white, their tibiæ pale, except a stain before middle, and their tips as well as the tarsi black; abdomen long, slender, closely and finely punctured, sides of segments 3—5 swollen; ovipositor longer than body, rufous, sheaths black with long pubescence. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.) Closely allied to *notanda*, Cress., from which it differs by the four anterior legs being mostly white.

***Pimpla animosa*, n. sp.**

♀.—Black, polished; palpi white; antennæ pale testaceous, paler at base beneath and darker above; tegulæ white; pleura with an iridescent reflection, flanks and apical margin of metathorax, and small ill-defined patch on each side of pleura before middle coxæ, sanguineous; wings hyaline, iridescent, nervures and stigma black, areolet incomplete, having outer nervure obsolete; legs slender, fulvo-ferruginous, anterior pair pale yellow, with white trochanters, middle tibiæ fuscous with median white annulus, posterior tibiæ black, with narrow annulus at base and broad one at middle, white, their tarsi

white with tips of joints black; abdomen dilated, depressed, dark rufous, base of the first, narrow apical margins of segments 2—5 and the following segments entirely, black; segments 2—5 each with lateral transverse swelling; apical segments polished; ovipositor about half the length of abdomen, sheaths black with long pubescence. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.)

Polysphincta texana.

Polysphincta texana, Cress. Trans. Am. Ent. Soc. iii., p. 149.

One ♀ specimen from Comal Co.

Lampronota parva.

Lampronota parva, Cress. Trans. Am. Ent. Soc. iii., p. 163.

Two ♀ specimens. (Belfrage.)

Euxorides americanus.

Euxorides americanus, Cress. Trans. Am. Ent. Soc. iii., p. 167.

One ♀ specimen from Comal Co.

Xylonomus australis.

Xylonomus australis, Cress. Trans. Am. Ent. Soc. iii., p. 167.

One ♀ specimen from Comal Co.

Labena grallator.

Cryptus grallator, Say, Bost. Journ. Nat. Hist. i., p. 236.

Five ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Mesoleptus bicoloratus, n. sp.

♂.—Head and thorax black; legs and abdomen, except first segment, honey-yellow; antennæ long, slender, brown, scape beneath testaceous; head transversely ovate; thorax subopaque, somewhat gibbous anteriorly; scutellum raised, convex; tegulæ testaceous; wings hyaline, iridescent, stigma large, black, pale at base, areolet 5-angular, incomplete, the outer nervure being obsolete; legs long and slender; abdomen slender, petiolated, first segment gradually dilated at apex, which is margined with honey-yellow. Length .25 inch.

One specimen. (Coll. G. W. Belfrage.)

Mesoleptus delicatus, n. sp.

♂.—Ferruginous, abdomen paler; head transverse, subbuccate; face moderately broad, eyes ovate, rather prominent; clypeus flat, shining, tips of mandibles black; antennæ long and slender; mesothorax rounded above, with well-defined carinæ, forming on the disk a large irregular area; pleura protuberant beneath; wings large, ample, hyaline, iridescent, stigma large, black, pale at base, marginal cell broad, areolet subtriangular, legs very slender, rather paler than body, tips of posterior tibiæ slightly dusky; abdomen narrow, slender, subdepressed, first segment gradually and but slightly dilated at apex, lateral tubercles not prominent. Length .23 inch.

Two specimens. (Belfrage.)

Mesoleptus? strigosus, n. sp.

♂.—Long, very slender, honey-yellow; head subglobose, cheeks swollen, tips of mandibles and flagellum of antennæ, black, the latter long and testaceous; thorax elongate, narrowed into a neck anteriorly; metathorax as long as pro- and mesothorax combined, subconvex above and transversely striated; mesothorax subtrilobate; wings rather short, narrow, hyaline, beautifully iridescent, stigma narrow, marginal cell very long, lanceolate, areolet small, complete, subquadrate; legs long and slender, posterior coxæ unusually long, apices of four anterior tarsi dusky, posterior tarsi dusky with basal half of third joint white, spurs of posterior tarsi unequal; abdomen long and slender, slightly and gradually widened from base to apex, first segment almost cylindrical, smooth and polished, the remaining segments finely punctured. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.) A very elongate slender form, with rather short narrow wings; it will probably form a new genus.

Mesoleptus? rotundiceps, n. sp.

♂.—Minute, honey-yellow, incisures of thorax blackish; antennæ long, slender, dusky; head large, subrotund, emarginate posteriorly, cheeks large, swollen; wings hyaline, iridescent, stigma large, pale at base, areolet 5-angular, incomplete, the outer nervure obsolete; legs rather long, slender; abdomen slender, petiolated, depressed, apex stained with fucous. Length .12 inch.

One specimen. (Coll. G. W. Belfrage.)

Mesoleptus? stigmaterus, n. sp.

♂.—Small, entirely honey-yellow, smooth and shining, thorax and apex of abdomen darker; head transverse, eyes and ocelli unusually prominent; tegulæ pale; wings ample, hyaline, iridescent, stigma large, broad, blackish, pale at base, marginal cell large, subtriangular, areolet incomplete; legs slender; abdomen slender, petiolated, petiole long, rather slender. Length .17 inch.

One specimen. (Coll. G. W. Belfrage.) This has much the appearance of a winged male of the genus *Pezomachus*.

Bassus sycophanta.

Bassus sycophanta, Walsh, Trans. Am. Ent. Soc. ii., p. 112.

Two specimens. (Belfrage.)

Exochodes texana, n. sp.

♂.—Differs from *mexicana* only as follows:—Size much smaller; antennæ paler; sides of prothorax, mesothorax and pleura entirely, flanks of metathorax and two spots at base above, black; wings hyaline, not yellowish, apex slightly dusky, a very small petiolated areolet; a spot on posterior coxæ beneath, as well as base within, and their femora, tinged with dusky, but not black at tips. Length .35 inch.

One specimen from Comal Co.

Exochus atrocoxalis.

Exochus atrocoxalis, Cress. Trans. Am. Ent. Soc. ii., p. 114.

One specimen. (Belfrage.)

Exochus evectus, n. sp.

♀.—Black, smooth and shining; face, line on each side of antennæ, mandibles, palpi, spot beneath eyes and a spot at summit, lemon-yellow; apex of scutellum piceous, a slender transverse yellowish line on postscutellum; tegulæ brown, with a white spot in front; a slender line beneath tegulæ and a large cuneiform spot in front, yellowish; sometimes the pleura has a yellowish line on anterior margin; wings hyaline, nervures and stigma blackish, no areolet; metathorax with a large subquadrate central area; legs short, robust, femora much swollen, especially posterior pair, yellowish-fulvous, four anterior coxæ more or less yellow, tibiæ whitish, apices of intermediate pair dusky, apical third of posterior pair fuscous, tarsi whitish with tips of joints sometimes dusky; abdomen smooth and polished, slightly pubescent towards apex. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.) Closely allied to *pallipes*, Cress.

Exochus texanus, n. sp.

♂.—Black, shining, with a very short, pale golden, sericeous pile, more obvious in certain lights; face, clypeus, space beneath eyes and palpi, lemon-yellow; mandibles blackish-brown; thorax flattened above, very finely punctured; scutellum flat, polished, lateral margin carinate; metathorax shining, with six longitudinal carinæ, two on disk, short and approximate, and two on each side, apex truncate; tegulæ whitish; wings hyaline, nervures and stigma black, no areolet; legs short, robust, uniformly bright ferruginous, femora incrassate; abdomen shining, closely and finely punctured, first segment with four longitudinal carinæ, those on disk approximate; second segment with three longitudinal carinæ, the central one continued on the third segment nearly to apex, the lateral one not quite reaching the middle of same segment. Length .28 inch.

One specimen. (Coll. G. W. Belfrage.) Allied to *carinatus*, Cress.

Metopius Hagenii, n. sp.

♀.—Black, with short, pale glittering pubescence, especially on cheeks and sides of thorax; face white, with a central longitudinal black spot; narrow anterior orbits, clypeus, labrum, spot on mandibles, another beneath eyes and palpi, white; a black dot on each side of clypeus; antennæ entirely black except a dot on scape beneath; mesothorax closely and rather coarsely punctured; scutellum with a transverse, subcordate white spot at tip; spot on tegulæ, a line immediately beneath, and a cuneiform spot further beneath, white; wings hyaline, nervures and stigma black; areolet rhomboidal, shorter than in *pollinctorius*; legs black, tips of four anterior femora, their tibiæ except line behind, their tarsi except tips and basal half of posterior tibiæ, white; abdomen entirely black, coarsely punctured, with coarse deep striæ on disk of segments 2 and 3; first segment with two prominent longitudinal carinæ, more sharply defined near base; venter whitish. Length .52 inch.

One specimen. (Boll. Coll. Mus. Comp. Zool.) A very distinct species, distinguished at once from *pollinctorius*, Say, by the immaculate abdomen and banded posterior tibiæ. The ♂, of which I have one specimen from Massachusetts, differs only by the longer antennæ, by

the face being entirely white, by the four anterior femora being white before and the posterior tarsi being white except at tip of joints.

This fine species is dedicated to my friend Dr. H. Hagen in acknowledgement of the valuable assistance he has rendered me in the study of texan hymenoptera.

Exetastes bioculatus, n. sp.

♂.—Head and thorax black; metathorax, legs and abdomen ferruginous; clypeus except base, mandibles except tips, and palpi, whitish; antennæ with basal half black, middle with whitish annulus occupying about six joints, beyond this the joints are brown; two broad sublunate spots on mesothorax anteriorly; scutellum, postscutellum, tegulæ, dot before and spot beneath, white; metathorax rugose, tinged with yellowish above; wings hyaline, apex faintly dusky; four anterior coxæ yellowish-white, posterior tarsi white, base of first joint, the one or two terminal joints and apex of tibiæ, blackish; abdomen short, slender, smooth, polished, entirely ferruginous. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.) May be the ♂ of *decoloratus*, Cress.

Exetastes scutellaris.

Exetastes scutellaris, Cress. Proc. Ent. Soc. Phil. iv., p. 279.

Two ♂ ♀ specimens. (Belfrage.)

Exetastes fascipennis.

Exetastes fascipennis, Cress. Proc. Ent. Soc. Phil. iv., p. 278.

Four ♀ specimens. (Belfrage.)

Ophion macrurum.

Ichneumon macrurum, Linn. Mant., p. 540.

Two specimens. (Boll.)

Ophion bilineatus.

Ophion bilineatus, Say, Mael. Lyc., p. 75; Bost. Journ. i., p. 248.

Numerous ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Ophion bifoveolatus.

Ophion bifoveolatus, Brullé, Hym., p. 139.

Four ♂ specimens. (Belfrage.)

Trachynotus texanus, n. sp.

♀.—Dull ferruginous; orbits whitish in front, pale behind, a black spot beneath base of antennæ; antennæ black, scape ferruginous; mesothorax rugose, with a lateral yellow line; scutellum yellowish, scutellar region blackish; pleura beneath and extreme sides of metathorax black; wings faintly dusky, iridescent; legs ferruginous, anterior coxæ and trochanters pale, posterior knees and tarsi fuscous; abdomen dull ferruginous, fuscous above and at apex, base of first segment yellow; ovipositor longer than first abdominal segment. Length .35 inch.

Two ♀ specimens. (Belfrage.) Closely allied to *ejuncidus*, Say.

Exochilum nigrovarium.

Exochilum nigrovarium, Brullé, Hym., p. 172.

One ♀ specimen. (Belfrage.)

Thyreodon morio.

Ichneumon morio, Fabr. Ent. Syst. ii., p. 180.

One ♀ specimen. (Boll.)

Anomalon magniceps, n. sp.

♀.—Black; head large, much wider than thorax, broadly emarginate behind, with full prominent cheeks; face, anterior orbits, lower part of cheeks, clypeus, mandibles except tips, and palpi, pale yellow; antennæ two-thirds the length of body, entirely pale orange-yellow; mesothorax, scutellum, tegulæ and sometimes a large spot beneath wings, ferruginous; metathorax coarsely reticulated, sometimes tinged with rufous on disk and at apex; wings uniformly dark fuliginous, with a brassy reflection, discoidal cell not contracted at base; legs black, anterior pair entirely, intermediate femora in front, their tibiæ except tips, their tarsi, basal half or two-thirds of posterior tibiæ, and more or less of their tarsi, ferruginous or yellowish-ferruginous; abdomen entirely black, first segment swollen at tip. Length .85 inch.

Two specimens. (Boll.)

Anomalon pallitarse, n. sp.

♂.—Deep black, shining; anterior orbits, clypeus except central black spot, spot on mandibles, and palpi, yellowish; antennæ two-thirds the length of body, orange-yellow, their basal joints black, scape yellow beneath; metathorax coarsely reticulated, with a shallow longitudinal central furrow; wings uniformly fuliginous, discoidal cell contracted at base; legs black, line on anterior femora in front, their tibiæ, intermediate tibiæ in front and all the tarsi, pale yellow; sometimes the posterior tibiæ are palish at base; abdomen entirely black, first segment not swollen at tip. Length .80 inch.

Two specimens. (Belfrage.)

Anomalon orbitalis, n. sp.

♂.—Black, shining; anterior orbits, cheeks, face, clypeus, mandibles except tips, palpi and scape beneath yellowish; antennæ about half the length of body, pale ferruginous, black at base; tegulæ ferruginous; metathorax finely reticulated, with a deep longitudinal central furrow; wings uniformly fuliginous, discal cell contracted at base; four anterior legs pale yellow, their femora honey-yellow, intermediate coxæ black at base; posterior legs black, their trochanters, basal half of tibiæ, and their tarsi, yellow; first, second and upper half of third abdominal segment pale honey-yellow, remainder black, disk of second segment not swollen at tip. Length .60 inch.

Three specimens. (Belfrage.)

Anomalon fulvescens.

Cremastus fulvescens, Cress. Proc. Ent. Soc. iv., p. 285.

Two ♂ specimens. (Belfrage.) Color honey-yellow or pale ferruginous, with vertex, anterior middle of mesothorax and tip of abdomen black.

Anomalon melleum, n. sp.

♀.—Small, slender, uniformly honey-yellow; face, clypeus, mandibles except tips, palpi, lower posterior orbits and four anterior coxæ and trochanters, pale lemon-yellow; antennæ very slender, as long as body, dusky at tips; a black dot on anterior middle of mesothorax; metathorax pale at tip, slightly depressed medially; wings hyaline, iridescent, discoidal cell long, contracted at base; tips of posterior tibiæ and of all the tarsi, dusky; abdomen paler at base, first segment not swollen at tip, venter yellowish. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.)

Anomalon metallicum.

Anomalon metallicum, Norton, Proc. Ent. Soc. Phil. i., p. 364.

One ♂ specimen. (Boll.)

Mesochorus uniformis, n. sp.

♀.—Honey-yellow or rufo-ferruginous; face pale; orbits whitish, as well as spot on mandibles, and palpi; tips of mandibles black; antennæ long and very slender, entirely pale honey-yellow; mesothoracic lines faintly impressed; scutellum prominent, convex; metathorax rounded, with distinct elevated lines; tegulæ and dot in front yellowish-white; wings hyaline, iridescent, nervures pale, stigma sometimes fuscous, pale at base, areolet large, rhomboidal; legs pale yellow, posterior coxæ, femora and tips of their tibiæ, honey-yellow, tarsal tips dusky; abdomen polished, apex more or less discolored; ovipositor very short. Length .30 inch.

Two specimens. (Coll. G. W. Belfrage.)

Mesochorus electilis, n. sp.

♀.—Black, shining; face, orbits, cheeks, clypeus and mouth, pale ferruginous; antennæ entirely black, except incisure between joints 2 and 3, which is whitish; metathorax with distinct elevated lines; tegulæ and spot beneath, pale; wings hyaline; legs, including coxæ pale ferruginous, posterior tibiæ paler, their tips and knees blackish, all the tarsi more or less obfuscated; abdomen polished, first and second segments black, a large pale yellowish-ferruginous spot covers apex of second and most of third segments; apex of third segment blackish; remainder dull ferruginous; ovipositor short. Length .20 inch.

Two specimens. (Belfrage.) Resembles *luteipes*, Cress.

Paniseus geminatus.

Ophion geminatus, Say, Contrib. Mael. Lyc. i., p. 76.

Numerous ♂ ♀ specimens. (Belfrage.) This species varies much in size.

Campoplex expertus, n. sp.

♂.—Black; face, cheeks, pleura and metathorax with short silvery pile; most of mandibles and palpi yellowish-white; antennæ entirely black; mesothorax densely sculptured, without impressed lines; metathorax with a finely impressed central longitudinal furrow; tegulæ white; wings hyaline, areolet large, slightly petiolated; coxæ black; anterior legs, intermediate tibiæ and tarsi pale yellow; four posterior trochanters and femora honey-yellow; pos-

terior tibiæ except base, and most of their tarsi blackish; base of the tibiæ and spurs pale; abdomen pale ferruginous, extreme base of first segment and disk of second, not reaching apex, black. Length .42 inch.

Two specimens. (Belfrage.)

Campoplex bellus, n. sp.

♂.—Differs from *expertus* only as follows:—Base of anterior femora, intermediate femora except apices, posterior trochanters, femora, apical two-thirds of their tibiæ and their tarsi except base of first joint, black; first and second abdominal segments entirely black. Length .42 inch.

Var. *a*.—Areolet smaller, two apical segments of abdomen black.

Two specimens. (Belfrage.)

Limmeria corrupta, n. sp.

♀.—Dull black; face, cheeks, pleura, metathorax and coxæ with short silvery pile; mandibles brown at tips; palpi whitish; antennæ entirely black; mesothorax opaque, densely and finely sculptured; metathorax without distinct elevated lines, apex slightly excavated; tegulæ white; wings hyaline, areolet small, petiolated; legs ferruginous, coxæ and trochanters black; abdomen ferruginous, fourth and following segments subcompressed, base of first segment black, apex swollen, smooth and shining; ovipositor not longer than first abdominal segment. Length .43 inch.

One specimen. (Coll. G. W. Belfrage.)

Limmeria illepada, n. sp.

♂.—Black, opaque; head and thorax densely sculptured, clothed with a very short yellowish pubescence, longer and very dense on metathorax; mandibles dull rufous at tips; palpi and tegulæ dull yellow; metathorax roughly sculptured, with a shallow central groove; wings subhyaline, dusky at tips, areolet minute, petiolated; coxæ and trochanters black, four anterior femora honey-yellow, their tibiæ and tarsi pale yellow; posterior legs black, their femora reddish within and extreme base of their tibiæ and of their tarsi pale; abdomen very broad, and compressed at tip, ferruginous, basal two-thirds of first and second segments and apical margin of second, black; venter yellowish. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.)

Limmeria infesta, n. sp.

♀.—Black, feebly punctured, and with a very short pale glittering pubescence, very dense on metathorax; spot on mandibles, palpi, scape beneath and tegulæ yellowish-white; metathorax finely sculptured, with a well-defined central groove; wings hyaline, dusky at tips, areolet minute, petiolated; legs pale ferruginous, coxæ black, trochanters and four anterior tibiæ and tarsi pale yellowish, extreme tips of posterior femora, their tibiæ and tarsi fuscous. extreme base of tibiæ and their spurs whitish; abdomen subcompressed at tip, ferruginous, first and second segments except tips, and base of third black; venter pale; ovipositor very short. Length .38 inch.

One specimen. (Coll. G. W. Belfrage.)

Limmeria fura, n. sp.

♀.—Black, minutely punctured, rather shining, with a very short, fine, whitish pile; face flattened, subgranulate; mandibles large, orange-yellow, black at base and apex; scutellum subconvex, polished; metathorax short, posterior face deeply and longitudinally excavated, a bisinuate carina near base, enclosing on each side a smooth semicircular space; tegulæ white; pleura shining, with a lateral shallow excavation; wings dusky hyaline, nervures and stigma black, areolet rather large, triangular, not petiolated; femora bright rufo-ferruginous, posterior pair robust, four anterior tibiæ more or less, and their tarsi except tips of joints, pale yellowish, extreme base of posterior tibiæ, their spurs and extreme base of tarsal joints, whitish; abdomen robust, convex, subclavate, smooth and sericeous, with pale pubescence, first segment smooth and polished, apex swollen; venter pale; ovipositor half the length of abdomen. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.)

Limmeria annulipes.

Mesoleptus annulipes, Cress. Proc. Ent. Soc. Phil. iii., p. 257.

One ♀ specimen. (Belfrage.)

Limmeria obscura.

Mesoleptus obscurus, Cress. Proc. Ent. Soc. Phil. iii., p. 261.

Three ♀ specimens. (Belfrage.)

Limmeria rivalis, n. sp.

♂ ♀.—Black, opaque, clothed with a short pale glittering pubescence; mandibles except tips, palpi and tegulæ white; scape beneath honey-yellow; metathorax rounded above, with sharply defined elevated lines, forming a large elongate central area; wings hyaline, areolet small, triangular, petiolated; legs pale ferruginous, trochanters of ♀ and four anterior coxæ and trochanters and anterior tibiæ and tarsi of ♂ whitish; extreme tips of posterior tibiæ and of their tarsal joints of ♀, and their tarsi entirely of ♂, fuscous; abdomen subcompressed at tip, ferruginous, base of first segment of ♂, and first segment except apex, and base of second of ♀, black; apex of first segment rather suddenly swollen behind middle; ovipositor of ♀ half the length of abdomen. Length .20—.25 inch.

Two specimens. (Coll. G. W. Belfrage.)

Charops tibialis, n. sp.

♂.—Black, clothed with short pale pubescence; mandibles, palpi, scape beneath and tegulæ white; scutellum broad, flat, pubescent; metathorax short, subexcavated behind, coarsely sculptured; wings hyaline, iridescent; legs black, two anterior pairs except coxæ ferruginous, their trochanters whitish, posterior tibiæ with a very broad whitish annulus nearly reaching base; abdomen very slender at base, broad, compressed and truncate at apex. Length .25 inch.

One specimen. (Coll. G. W. Belfrage.)

Porizon audax, n. sp.

♂.—Black, shining; face, orbits slightly interrupted at summit of eyes, clypeus, mandibles except tips, scape beneath, and tegulæ, lemon-yellow; antennæ approximate at base, longer than head and thorax, black or brown-black; mesothorax sparsely punctured; pleura and metathorax laterally with short pale sericeous pile, the latter with well-defined elevated lines; wings short, broad, fusco-hyaline, clear at tips, stigma large, black, with a pale spot at base; legs honey-yellow, posterior coxæ black, four anterior coxæ beneath and their trochanters lemon-yellow, posterior tibiæ and tarsi more or less obfuscated; abdomen dark honey-yellow, the first and basal two-thirds of second segment black. Length .35—.40 inch.

Four specimens. (Belfrage; Boll.)

Porizon orbitalis, n. sp.

♀.—Black, subopaque, thorax densely and rather coarsely punctured; orbits broad beneath eyes and interrupted opposite ocelli, mandibles except tips, and tegulæ, lemon-yellow; apical margin of clypeus and scape beneath, rufous; antennæ approximate at base, longer than head and thorax, black; metathorax with well-defined elevated lines, sides with silvery pile; wings hyaline, large, blackish, with a pale dot at base; legs ferruginous, four posterior coxæ black, four anterior legs yellowish in front, tips of posterior tibiæ and tarsi fuscous; abdomen pale ferruginous, first and second, and a spot at base of third segments, above black; ovipositor two-thirds the length of abdomen. Length .40 inch.

♂.—Face, clypeus, most of mandibles and scape beneath, lemon-yellow; posterior tibiæ and tarsi darker; third abdominal segment entirely ferruginous.

Three specimens. (Belfrage.)

Porizon hyalinipennis, n. sp.

♀.—Black, shining; orbits, clypeus, mandibles except tips, spot on scape beneath and tegulæ, pale lemon-yellow; tip of clypeus tinged with honey-yellow; antennæ longer than head and thorax, black; thorax distinctly but not coarsely punctured; pleura and metathorax with fine whitish pile, the latter more coarsely punctured, with well-defined elevated lines; wings whitish hyaline, nervures pale, stigma large, black, pale at base; four anterior coxæ, all the trochanters and base of tarsi, pale yellow, posterior coxæ and tips of their tibiæ black, tarsal tips fuscous; abdomen robust, pale ferruginous, first and second segments above black; venter lemon-yellow; ovipositor longer than first abdominal segment. Length .38 inch.

♂.—Face yellow; four anterior legs paler; apical segment of abdomen more or less marked with black above.

Four specimens. (Belfrage.) Resembles *orbitalis*, but is much less coarsely punctured and with clearer wings.

Porizon stigmaterus, n. sp.

♂ ♀.—Black; spot on mandibles, extreme base of wings, venter of ♀, and clypeus and tegulæ of ♂, lemon-yellow; wings hyaline, iridescent, nervures and stigma blackish, the latter large and conspicuous; legs dull honey-yellow, tinged with fuscous, coxæ and trochanters black, base and apex of posterior

tibiæ and tarsal tips fuscous; abdomen subrobust; ovipositor nearly as long as abdomen. Length .30—.32 inch.

Eight specimens. (Belfrage.)

Porizon facilis, n. sp.

♀.—Long, slender, honey-yellow or pale ferruginous; head lemon-yellow, two spots behind antennæ, sometimes confluent, spot covering ocelli, occiput and tips of mandibles, black; antennæ longer than head and thorax, black or brown-black, scape yellowish; thorax more or less tinged with yellow; mesothorax generally with a broad central black stripe, margined laterally with lemon-yellow; collar, tegulæ and scutellum pale yellow; pleura beneath and base of metathorax above more or less black, the latter with well-defined elevated lines, the dorsal surface finely transversely striated; wings hyaline, iridescent, nervures and stigma pale fuscous; legs long and slender, pale honey-yellow, coxæ, trochanters and knees more or less pale yellow, base and apex of posterior tibiæ and tips of tarsal joints fuscous; abdomen long and slender, base of first, basal two-thirds of second and spot at base of two or three following segments black; venter yellow; ovipositor as long as abdomen. Length .30—.33 inch.

♂.—Rather more slender, eyes larger, thorax more varied laterally with pale yellow; the black on metathorax extending to apex; pleura with a black spot on each side anteriorly; first and second segments of abdomen except tips and more or less of base of remaining segments black.

Several specimens. (Belfrage.)

Porizon macer, n. sp.

♀.—Head black, lower part of face, orbits, clypeus, mandibles, palpi, tegulæ and scutellum, lemon-yellow; antennæ as long as head and thorax, black; thorax rufo-ferruginous, a broad central stripe on mesothorax, scutellar region, base of metathorax and tip above, the extreme sides, spot beneath wings and pleura beneath, black; metathorax minutely and strongly punctured, with well-defined elevated lines, posterior face transversely striated; wings hyaline, iridescent, stigma large, pale fuscous; four anterior legs yellow, posterior pair honey-yellow, with pale trochanters, base of their coxæ black, base and apex of their tibiæ and most of their tarsi fuscous; abdomen long, slender, yellow-ferruginous, first and second segments above except tips and base of third segment black, apical segments dusky above; ovipositor three-fourths the length of abdomen. Length .30 inch.

♂.—Black; face, orbits, clypeus, mandibles, palpi, scape beneath, tegulæ and scutellum, pale yellow; antennæ as long as abdomen; lateral margin of mesothorax, prothorax except lateral middle, and, long oblique stripe on each side of pleura, yellow-ferruginous; legs ferruginous; base of abdominal segments 3—5 above and apex black. Length .26 inch.

Three specimens. (Belfrage.) This may be nothing more than an extreme variety of *facilis*.

Porizon? agilis, n. sp.

♀.—Ferruginous; spot enclosing ocelli and two large spots on occiput, fuscous; mandibles white with black tips; antennæ blackish, scape ferruginous; spot on mesothorax in front and on each side posteriorly, scutellar region

and metathorax above except apex, black; metathorax with sharply-defined elevated lines; wings hyaline, iridescent, nervures and stigma fuscous; legs pale yellow, tinged with honey-yellow, especially posterior coxæ and femora, base of posterior trochanters, stripe on sides of their femora, base and apex of their tibiæ and their tarsi except base, fuscous; tibial spurs white; posterior femora with a short acute spine between middle and apex; abdomen slender, first segment except base and second segment except apex blackish; apical segments dusky above; venter pale yellow; ovipositor as long as abdomen. Length .20 inch.

One specimen. (Coll. G. W. Belfrage.)

Porizon? delicatus, n. sp.

♂.—Pale honey-yellow; head much broader than thorax, eyes large and prominent; face, orbits, clypeus, mandibles except tips, and scape pale lemon-yellow, middle of face tinged with honey-yellow; antennæ three-fourths as long as body, dusky; thorax uniformly pale honey-yellow; metathorax with distinct elevated lines; wings hyaline, iridescent, nervures and stigma pale fuscous; legs slender, pale yellow, white at base, tips of posterior tibiæ dusky; abdomen more or less black at base of all the segments above, especially that of second segment. Length .20 inch.

One specimen. (Coll. G. W. Belfrage.)

Cremastus piceus, n. sp.

♀.—Shining piceous-black; mandibles except tips white; orbits and tip of clypeus honey-yellow; metathorax with well-defined elevated lines; tegulæ and extreme base of wings yellowish-white; wings hyaline, iridescent, nervures and stigma pale; legs dull honey-yellow, tinged with ferruginous, posterior coxæ black, their tibiæ and tarsi more or less obfuscate; abdomen polished, piceous, paler at apex; venter with pale bands; ovipositor porrect, two-thirds the length of abdomen. Length .16 inch.

One specimen. (Coll. G. W. Belfrage.)

Eiphosoma texana, n. sp.

♀.—Black; orbits, face, clypeus, mandibles, palpi, scape beneath, collar, prothorax except lateral triangular black spot and upper central margin, two stripes on metathorax, scutellum, four stripes on metathorax, the lateral one interrupted near base, tegulæ, angular line beneath, spot beneath posterior wings, an oblique forked line on each side of pleura and a spot beneath, all very pale yellowish-white; antennæ short, black; mesothorax with large distinct punctures; metathorax slightly excavated centrally; wings hyaline, areolet minute, petiolated; four anterior legs white, their femora pale honey-yellow, stripe on trochanters behind and tips of tarsi, black; posterior coxæ white, black within and black spot on outside, their trochanters black, white at tips, their femora rufo-ferruginous, white at extreme base and apex and with a black annulus before each, femoral tooth very small, their tibiæ and tarsi black, extreme base of tibiæ, a broad median annulus and spurs white; abdomen pale rufo-ferruginous, basal half of first segment white, a spot on middle of first segment, the second and dorsal edge of remaining segments except apex, black; ovipositor two-thirds the length of abdomen. Length .50 inch.

One specimen from Comal Co. A very distinct species.

PHARSALIA, n. gen.

Same form as *Eiphosoma*, rather more slender and roughly sculptured as in *Trachynotus*; head transverse, not wider than thorax, buccate; antennæ short, not longer than head and thorax; thorax gibbous, subtruncate anteriorly; scutellum broad, flat, with a broad deep central groove; metathorax longer and more pointed at apex than in *Trachynotus*, with a deep central groove; legs as in *Eiphosoma*, except that the posterior femora are shorter and unarmed, their tibiæ and tarsi shorter and more robust; abdomen as in *Eiphosoma*, except that it is rather longer and more slender; wings short and very narrow, with the neuration as represented by the accompanying figure, the dotted lines of which indicate very indistinct nervures.

**Pharsalia texana**, n. sp.

♀.—Black, face with silvery pubescence; cheeks, pleura and metathorax entirely covered with a dense, appressed silvery pile; anterior orbits, all beneath antennæ, lower part of cheeks and scape beneath, whitish; vertex and occiput rugose; antennæ not longer than head and thorax; mesothorax coarsely rugose; scutellum deeply excavated centrally; metathorax coarsely reticulated, central groove deep and shining; wings hyaline; four anterior legs bright honey-yellow, their coxæ and trochanters, base and apex of tibiæ, and tarsi at tips, white; posterior coxæ black, their trochanters with basal half white and balance black, their femora black above, ferruginous beneath, their tibiæ ferruginous, white at base, below which is a narrow black annulus, their tarsi blackish; abdomen nearly three times longer than head and thorax together, black, apex of third segment, and the fourth and fifth entirely except dorsal ridge, ferruginous; ovipositor very short. Length .50 inch.

One specimen. (Belfrage.)

In the collection of the American Entomological Society there is another species belonging to this genus, from West Virginia, which I have named *P. virginicensis*. It is a ♂, having the eyes larger than in ♀ and face much narrower, especially beneath; the color is nearly altogether black, the cheeks, pleura and metathorax densely silvery; the anterior orbits, margin beneath eyes and mandibles whitish; antennæ entirely black; the scutellum broadly concave; anterior legs honey-yellow, with coxæ beneath, tibiæ, and tarsi except tips, white; intermediate legs fuscous, with annulus at base of tibiæ, and tarsi except tips, whitish; posterior legs black, with basal half of trochanters and annulus near base of tibiæ white; abdomen more slender than in *texana* and entirely black. Length .50 inch.

BRACONIDÆ.

Perilitus vulgaris.

Perilitus vulgaris, Cress. Can. Ent. iv, p. 83.

Three ♂ ♀ specimens. (Belfrage; Boll.)

Opus brunneiventris, n. sp.

♂.—Black, shining; clypeus, mandibles and scape beneath honey-yellow; antennæ as long as body, brown-black; metathorax roughly sculptured; tegule honey-yellow; wings faintly dusky, iridescent, stigma blackish, broad lanceolate; legs entirely pale honey-yellow; abdomen depressed, smooth and shining, pale brown, first segment black, lateral margins raised. Length .12 inch.

One specimen. (Coll. G. W. Belfrage.)

Eubadizon maculiventris, n. sp.

♂.—Pale honey-yellow, darker above; antennæ as long as body, dusky at tips; metathorax with a large square black central spot; tegulæ whitish; wings hyaline, beautifully iridescent, nervures and stigma dusky; tips of four posterior femora above, tips of their tibiæ, and a band near base (which is pale) and their tarsi except base of joints, fuscous; first and second abdominal segments above except lateral margins, black, middle of remaining segments fuscous or blackish. Length .20 inch.

One specimen from Comal Co.

Phylax nelleus, n. sp.

♀.—Honey-yellow, thorax beneath, legs and abdomen beneath paler; antennæ much longer than body, dusky towards tips which are very slender and involute; mesothorax slightly trilobed, and with the pleura dark honey-yellow; metathorax slightly roughened above; wings hyaline, iridescent, nervures dusky, stigma very pale, second cubital cell small, quadrate; legs slender, posterior pair darker, the tarsi dusky; first abdominal segment larger than second, sides nearly parallel, sides of second segment narrowly yellowish, apex of abdomen compressed, truncate, ovipositor short. Length .25 inch.

Three specimens. (Belfrage.)

Macrocentrus nuperus, n. sp.

♀.—Pale honey-yellow, shining; eyes large, prominent, black; tips of mandibles and band across vertex, blackish; antennæ longer than body, very slender, the five or six basal joints blackish; mesothorax strongly trilobed, middle lobe blackish centrally, side lobes dusky; metathorax very finely rugulose; wings hyaline, beautifully iridescent, nervures dusky, stigma pale; abdomen long, slender, apex dusky, first segment slender, with lateral tubercles prominent; ovipositor as long as body, honey-yellow, sheaths pilose, fuscous. Length .30 inch.

Two specimens. (Belfrage.)

Macrocentrus delicatus, n. sp.

♂ ♀.—Slender, pale honey-yellow; spot enclosed by ocelli, and tips of mandibles blackish; eyes prominent, black; antennæ longer than body, very slender, curled at tips, base more or less dusky, incisures of joints fuscous;

mesothorax strongly trilobed; sometimes the scutellum, metathorax above and basal segments of abdomen above are more or less dusky; wings pale yellowish-hyaline, iridescent, nervures fuscous, stigma pale yellow; thorax paler beneath; legs slender, yellowish-white, paler at base, tips of tibiæ and of tarsi faintly dusky; abdomen longer than head and thorax, smooth, apex more or less dusky, lateral tubercles of first segment not prominent; ovipositor of ♀ generally much longer than body, honey-yellow, sheaths pilose, fuscous. Length .25 inch.

Three specimens. (Belfrage.) This is a very variable species and occurs in the Eastern, Middle and Western States and also in Mexico.

Helcon texanus, n. sp.

♀.—Black, shining, metathorax, most of pleura, posterior legs and abdomen ferruginous; antennæ longer than head and thorax, curled at tips; metathorax rugose; wings pale smoky hyaline, a broad transverse angular streak beneath base of stigma; posterior coxæ, trochanters and femora ferruginous, tips of tarsi rufo-testaceous, posterior femora unarmed; abdomen polished, except first segment which is finely and longitudinally roughened; ovipositor longer than body. Length .38 inch.

One specimen. (Coll. G. W. Belfrage.)

Ichnutes abdominalis, n. sp.

♀.—Black, shining, thinly clothed with a pale sericeous pile; antennæ stout, brown-black, sericeous; wings uniformly fuliginous, two or three pale spots beneath stigma, nervures and stigma black; legs stout, yellow-ferruginous, coxæ and trochanters black, tarsi fuscous at tips; abdomen yellow-ferruginous, strongly pale sericeous. Length .18 inch.

One specimen. (Coll. G. W. Belfrage.)

Toxoneuron seminigrum.

Tenthredoides seminiger, Cress. Proc. Ent. Soc. Phil. iv., p. 291.

One ♀ specimen. (Belfrage.)

Sigalphus texanus, n. sp.

♀.—Black, vertex and cheeks shining, face pubescent; palpi and four or five basal joints of antennæ honey-yellow; thorax subopaque, sides of mesothorax shining; metathorax with a central longitudinal carina, apex truncate, lateral angles subacute; tegulæ piceous; wings hyaline, apical half faintly dusky, stigma black; legs ferruginous, tips of four posterior tibiæ and their tarsi blackish; segments of abdomen completely coalite, longitudinally aciculated to near apex where the surface is granulated, apex deeply emarginate. Length .15—.17 inch.

Three specimens. (Belfrage.)

Chelonus texanus, n. sp.

♀.—Short, broad, robust, black, opaque, with a pale sericeous pile; face transversely striated; clypeus smooth; mandibles tinged with ferruginous; thorax rugose; scutellum and tegulæ shining; metathorax coarsely reticulated, truncate behind, with prominent acute lateral angles; wings hyaline, dusky on apical third, stigma blackish; legs honey-yellow, coxæ, trochanters and

base of posterior femora black; abdomen broad ovate, coarsely granulated, rounded at tip, base with two sharply defined carinæ converging posteriorly and a lateral honey-yellow spot; venter honey-yellow at base. Length .20 in.

Two specimens. (Belfrage.)

Chelonus electus, n. sp.

♂ ♀.—Black, opaque, densely and finely granulated, with a short, pale, glittering, sericeous pile, dense on the face of the ♂; clypeus shining, tips of mandibles yellowish; metathorax abrupt and excavated at tip, lateral angles prominent; tegulæ piceous; wings hyaline, dusky on apical half, stigma black; anterior femora except base, apex of intermediate pair, four anterior tibiæ and base of tarsi, posterior tibiæ except base and apex, and base of their tarsi, honey-yellow; abdomen with two whitish spots, sometimes confluent forming a broad band at base where the surface is more or less longitudinally rugose, and having a short longitudinal carina on each side, apex rounded. Length .17 inch.

Two specimens. (Coll. G. W. Belfrage.)

Chelonus connectens, n. sp.

♀.—Black, opaque, subsericeous; head densely punctured, clypeus shining, finely punctured, apical margin smooth and polished; mandibles yellowish, palpi dusky; scape ferruginous; thorax shining, coarsely punctured; scutellum sparsely punctured; metathorax rugose, deeply excavated posteriorly, lateral angles very prominent, subacute; pleura with large confluent punctures; tegulæ piceous; wings hyaline, apical half dusky, stigma blackish; legs, including coxæ, honey-yellow or ferruginous, posterior trochanters, tips of their tibiæ and their tarsi except base, fuscous, remainder of tibiæ and base of tarsi pale; abdomen sericeous, confluent punctured or somewhat coarsely granulated, base above with two large yellowish-white spots confluent anteriorly. Length .19 inch.

One specimen. (Coll. G. W. Belfrage.)

Chelonus cautus, n. sp.

♀.—Black, subsericeous, head and thorax somewhat shining, feebly punctured; tips of mandibles and palpi testaceous; scutellum polished; metathorax coarsely reticulate, truncate and excavate behind, lateral angles rather prominent, obtuse; tegulæ pale piceous; wings subhyaline, darker on apical half, stigma fuscous; legs black, all the trochanters, anterior femora except base, four anterior tibiæ, their tarsi except tips, posterior tibiæ except tips and base of their tarsi yellowish; abdomen finely and longitudinally sculptured, a large yellow spot, rounded posteriorly, occupies nearly the basal fourth of the segment; apex of abdomen rounded, with a deep transverse shining incision. Length .15 inch.

Two specimens. (Belfrage.)

Chelonus laticinctus, n. sp.

♀.—Elongate, black, somewhat shining, subsericeous; head and thorax above finely punctured; mandibles and scape beneath dull ferruginous; scutellum shining; lateral angles of metathorax not prominent; pleura coarsely punctured; wings uniformly pale fuliginous, iridescent, stigma black; legs ferruginous, coxæ, tips of posterior tibiæ and of the tarsi black; abdomen

elongate, narrower than usual, minutely and longitudinally sculptured, sericeous, a broad honey-yellow band occupying the basal third, apex rounded. Length .19 inch.

Two specimens. (Belfrage.)

Chelonus minimus, n. sp.

♀.—Black, opaque, finely sculptured, subsericeous; tips of mandibles and palpi reddish; clypeus shining; metathorax with two central carinæ enclosing a shining space, apex truncate, lateral angles not prominent; tegulæ piceous; wings hyaline, dusky at tips; legs black, tibiæ and tarsi pale testaceous; abdomen entirely black, densely and minutely sculptured, longitudinally so at base, apex rounded. Length .10 inch.

Two specimens. (Belfrage.)

Phaenrotoma tibialis.

Sigalphus (Triaspis) tibialis, Hald. Proc. Acad. Nat. Sci. Phil. iv., p. 203.

One ♂ specimen. (Belfrage.)

Microdus thoracicus, n. sp.

♂ ♀.—Large, robust; head broad, black, clothed with a short yellowish sericeous pubescence, cheeks prominent, shining; face broad, roughened, depressed on each side of middle; clypeus broad, sparsely punctured, anterior margin and small space on disk polished; labrum yellow; middle of mandibles reddish; palpi pale yellow; antennæ not quite as long as head and thorax, honey-yellow, tips black; prothorax except lateral black margin, mesothorax entirely, scutellum except large black spot on summit, scutellar region, and tegulæ, dull honey-yellow or ferruginous; mesothoracic lines deeply impressed; pleura black, polished; metathorax rough, opaque black, clothed with a rather dense yellowish pubescence; wings yellow, the apex beyond radial and cubital cells fuscous, nervures and stigma yellow, arcolet minute, triangular; legs robust, yellow, more or less tinged with honey-yellow, coxæ, base of trochanters, anterior femora behind, intermediate pair except tips, and posterior pair except extreme tips, black; posterior tibiæ honey-yellow at tips; abdomen short, shining, pale yellow; apical half of first segment and apical margin of second and third segments, sometimes interrupted centrally, black; apical segments more or less ferruginous; second segment with a deep transversely impressed line before apex and another, less deep, near base; ovipositor of ♀ nearly as long as abdomen. Length .35—.40 inch.

Seven specimens. (Belfrage.)

Microdus texanus, n. sp.

♂.—Slender, black, shining, with a short pale sericeous pile; head small, subtriangular; mesothorax strongly trilobed; metathorax coarsely reticulated, flanks rugose; wings blackish, with an irregular hyaline streak through first cubital cell and beneath arcolet, which is triangular—as usual; legs black, four anterior tarsi except terminal joint white; posterior coxæ and femora sanguineous, tibiæ and tarsi fuscous, varied with yellowish; abdomen short, narrow, entirely sanguineous, polished; first segment with lateral margin and disk carinate on basal half; second segment with a broad deep fovea on each side at base. Length .30 inch.

Two specimens. (Boll.)

Microdus nigriceps, n. sp.

♂.—Pale sanguineous; head, antennæ, spot behind postscutellum, pleura beneath, four anterior coxæ, all the trochanters, tips of four anterior tibiæ, posterior pair except middle, and all the tarsi, black; anterior margin of clypeus and tips of mandibles reddish; mesothorax trilobate; metathorax coarsely rugose; wings dark fuscous, a large irregular hyaline spot beneath stigma, continued beneath areolet, which is minute, triangular and petiolated; abdomen polished, first segment with a prominent lateral tubercle near base, second segment with two deep basal foveæ. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.)

Microdus verticalis, n. sp.

♀.—Yellow-ferruginous, shining, head small, triangular; a large spot on vertex covering ocelli and continued on occiput, a spot beneath base of each antenna, apex of clypeus, most of mandibles and a spot on each side above base of same, black; antennæ as long as body, slender, entirely black; mesothorax strongly trilobed; metathorax rounded, rugose; wings dark fuscous, with an irregular hyaline streak beneath stigma, areolet minute, petiolated; tips of posterior tibiæ and four posterior tarsi fuscous; abdomen as in *nigriceps*; ovipositor as long as abdomen. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.) This may be the ♀ of *nigriceps*.

Microdus pygmaeus, n. sp.

♀.—Small, black, shining; head, mesothorax, pleura and apex of abdomen polished; metathorax with two approximate discal carinæ; wings hyaline, faintly dusky, nervures and stigma fuscous, areolet minute, petiolated; legs honey-yellow, coxæ, posterior trochanters, tips of their tibiæ and all the tarsi blackish; posterior tibiæ pale, with a dusky spot before base; abdomen with two basal segments subopaque, densely and minutely sculptured, base of second segment with two deep foveæ and a central transverse, rather deeply impressed, subarcuate line; ovipositor longer than abdomen. Length .15 inch.

♂.—More shining than ♀; legs paler, all the coxæ, trochanters and base of femora black; abdomen entirely polished.

Two specimens. (Belfrage.)

Ischius læviventris, n. sp.

♂.—Slender, black, shining; head subrotund; mandibles and palpi brown; antennæ nearly as long as body; wings hyaline, costal nerve black, nervures and stigma pale; legs pale honey-yellow, coxæ and most of trochanters black; base of anterior femora, tips of posterior pair, tips of their tibiæ and all the tarsi dusky; abdomen piceous-black, polished; venter pale. Length .15 inch.

One specimen. (Belfrage.) A specimen from Dakota has the abdomen, except first segment, pale brown.

Agathis exoratus, n. sp.

♂.—Yellow-ferruginous, smooth, shining; head more or less varied with black; mandibles, palpi, antennæ entirely, collar above, tegulæ, scutellar region, postscutellum, metathorax except lateral spot, pleura beneath, four anterior coxæ, all the trochanters, extreme tips of posterior femora, and their

tibiæ and tarsi, black; sometimes the posterior tibiæ has a median pale annulus; lobes of mesothorax each with a shallow longitudinal groove; metathorax coarsely reticulated; wings dark fuscous, areolet quadrangular; abdomen smooth and polished. Length .30 inch.

Two specimens. (Belfrage.)

Agathis vulgaris.

Agathis vulgaris, Cress. Proc. Ent. Soc. Phil. iv., p. 295.

Two ♀ specimens. (Belfrage.)

Agathis meabilis, n. sp.

♂ ♀.—Differs from *vulgaris* principally by the four anterior legs being mostly black; the color of the head varies from almost entirely yellow-ferruginous to entirely black; the coxæ also vary in the same way; the posterior tibiæ is entirely black. Length .25—.30 inch.

Five specimens. (Belfrage; Boll.)

Agathis rubripes, n. sp.

♀.—Black, shining; face not as much prolonged as usual; metathorax opaque, rugose above, with a smoother rounded space on each side of middle; wings uniformly dark fuliginous, areolet small, quadrangular, stigma blackish; legs honey-yellow, coxæ, trochanters, apex of posterior tibiæ, and their tarsi except base of first joint, black; first abdominal segment opaque, rugulose, the second more or less tinged with reddish, depressed centrally, remaining segments polished; ovipositor rather longer than abdomen. Length .18 inch.

Three specimens. (Belfrage.)

Microgaster croceipes, n. sp.

♂ ♀.—Deep black, shining, tips of mandibles and palpi dull yellowish; metathorax coarsely reticulated, with a well-defined central and lateral carina; wings pale fuliginous, subhyaline at tip, stigma large, black, areolet complete, large; legs, except coxæ, orange-yellow; abdomen polished. Length .20 inch.

Six specimens. (Belfrage.)

Microgaster maculipennis, n. sp.

♂ ♀.—Black; clypeus, mandibles, palpi, scape beneath and tegulæ honey-yellow; metathorax as in *croceipes*; wings yellow, apex pale fuliginous, a fuliginous cloud beneath stigma and another covering discoidal cell, stigma yellow, apex black, areolet minute, complete; legs and abdomen honey-yellow, tips of posterior tibiæ and tarsi entirely, fuscous; abdomen polished, sides of first segment pale yellow. Length .23 inch.

Four specimens. (Belfrage.) A very handsome species.

Bracon epicus, n. sp.

♀.—Black, smooth and polished, sparsely clothed with a whitish pubescence; head very full behind the eyes; face smooth, even; posterior orbits and mandibles more or less tinged with reddish; scape dilated at apex, with the margin somewhat reflexed anteriorly; thorax impunctured; wings blackish, a hyaline spot beneath insertion of first and second cubital cells, the latter quadrangular, twice longer than broad, nervures and stigma black; legs entirely black, sericeous with pale hairs; abdomen broad ovate, shining, pale

sanguineous, incisures deeply impressed; first segment yellow medially, disc prominent and convex, a broad shallow depression on each side, with a longitudinal carina between the median prominence and the lateral margin; second segment very large, with a small triangular prominence on basal middle, on each side of which is a large, broad, deeply impressed fovea, and a transverse, deeply impressed line across the middle of the segment, broad on the disc and furcate laterally; ovipositor longer than abdomen. Length .40 inch.

Two specimens. (Belfrage.)

Bracon rugiceps, n. sp.

♀.—Differs from *epicus* as follows:—Head smaller, less full behind the eyes; face opaque and coarsely rugose; scape simple; a honey-yellow spot beneath each eye; the disc of median prominence on first abdominal segment with two elongate foveæ; the second segment has a flat rhomboidal prominence on basal middle, the tip of which is carinate and prolonged posteriorly nearly to the middle of the segment, with a deep fovea on each side and a deep oblique line on each side of basal middle, ending in a deep fovea near lateral margin; the transverse median line is furcate as in *epicus*. Length .40 inch.

One specimen. (Coll. G. W. Belfrage.)

Bracon simplex, n. sp.

♀.—Black, smooth and polished; head very full behind the eyes; face with a median tubercle below antennæ and two deep foveæ above clypeus, and between them two longitudinal depressions, the two tubercles at base of antennæ very prominent and tinged with reddish, and the lateral carinæ between base of antennæ and eyes also very prominent; excavations of vertex very deep and separated by a sharp carina; upper anterior orbits and middle of mandibles reddish; scape elongate-quadrate, both base and apex reflexed; disc of metathorax tinged with reddish; wings as in *epicus*, except that they are paler at tip, and the second cubital cell rather longer, with its basal nervure more oblique; legs black, sericeous with pale hairs, apex of trochanters beneath sanguineous; abdomen oblong-ovate, much narrower and more depressed than that of *epicus*, shining, pale sanguineous; first segment with a deep longitudinal groove near lateral margin, the disc subconvex, orange-yellow, margined and carinate laterally; second segment with a large cuneiform prominence on basal middle, the tip acuminate and prolonged posteriorly nearly to the transverse groove, with a profound depression on each side, median transverse line very deep, suberulate and simple—not being forked laterally, on each side near base a broad irregular shallow depression, and a small lateral fovea behind the transverse groove; remaining segments smooth and even, not incised, the terminal segment with a broad shallow depression; ovipositor as long as body. Length .45 inch.

One specimen from Comal Co. Very distinct from the two preceding species by the sculpture of the head and abdomen.

Bracon orbitalis, n. sp.

♂.—Black, smooth and shining; head not unusually full behind the eyes; face smooth, with an arcuated depressed line above orifice which is completely circular, vertex scarcely excavated; middle of mandibles reddish; orbits more or less reddish-yellow, dilated into a spot on each side of antennæ

and generally interrupted at summit, sometimes entirely obsolete; scape simple, acuminate at base, the apex not reflexed; disc of metathorax more or less reddish-yellow; wings as in *simplex*; legs entirely black, with pale sericeous hairs; abdomen ovate, polished, sanguineous; first segment much as in *epicus*, the disc with two short oblique depressed lines, or foveæ, near apex, diverging towards base; second segment with a flat triangular space on basal middle, bounded laterally by a deep subcrenulated depression, on each basal corner a more or less deep oblique fovea, median transverse line deep, sinuate, simple, not crenulated, a small shallow fovea on each side near apical corner; ovipositor of ♀ longer than abdomen. Length .20—.40 inch.

Twelve specimens. (Belfrage.) Varies much in size. Distinct from *simplex* by the smaller head, by the scape being simple, and by the different sculpture of the abdomen.

***Bracon radiatus*, n. sp.**

♀.—Narrow, elongate, black, shining, with long, sparse, whitish hairs; head very full behind the eyes; face punctured, with four small deep punctures above orifice, the anterior two approximate; scape simple, flagellum long and very slender; sutures of thorax crenulated; a deep transverse depression at base of scutellum; metathorax with large confluent punctures, coarse at apex, a smooth polished space on each side of basal middle; tegulæ piceous; wings blackish, with a small subhyaline spot on lower basal corner of second cubital cell, which is shorter than usual, with its basal nervure very oblique; legs black, with long pale hairs, apex of trochanters tinged with reddish; abdomen long, narrow, without transverse depressions; first segment subquadrate, about one-fourth the length of entire abdomen, longitudinally rugose, the intervals confluent punctured, a small polished space on apical middle; remainder of abdomen smooth and polished except basal fourth of second segment which is covered with radiating striæ; ovipositor as long as abdomen. Length .35 inch.

Two specimens. (Belfrage.)

***Bracon faustus*, n. sp.**

♀.—Black, shining, clothed with white pubescence; head small; mandibles tinged with reddish; a yellowish spot beneath each eye; sides of prothorax, except lower margin, sanguineous; mesothorax sanguineous, with a more or less broad black stripe on each lobe, sometimes obsolete on middle lobe; metathorax smooth, more or less reddish centrally; wings as in *epicus*; legs entirely black, with pale sericeous hairs; abdomen usually broad ovate, opaque, sanguineous, coarsely punctured, with broad, deep, crenulated incisures; first segment with the disc ovate and prominent, on each side a broad transversely striated excavation bounded laterally by a prominent carina; second segment carinate at base, a small smooth space on basal middle and a deep fovea on each basal corner, behind the middle a broad, very deeply impressed, longitudinally striated, transverse line, interrupted or divided by a smooth prominence; remaining segments convex, sometimes shining on disc, deeply incised at base; ovipositor rather more than half the length of abdomen. Length .32 inch.

Five specimens. (Belfrage.)

Bracon disjunctus, n. sp.

♀.—Differs from *radiatus* as follows:—Face with only two foveæ; prothorax coarsely rugose; metathorax with a rather prominent reddish tubercle on each side before apex, polished spaces at base larger; posterior coxæ, trochanters and femora except extreme tips, pale sanguineous; abdomen broader, the radiating striæ at base of second segment not so distinct and well defined. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.)

Bracon mavoritus, n. sp.

♀.—Sanguineous, shining; head subtransverse, not prominent behind eyes, black; orbits more or less interrupted, and spot beneath eyes, pale yellowish; thorax smooth, impunctured; metathorax with a central longitudinal groove; wings blackish, paler at apex, base of radial cell darker, an oblique hyaline line across first cubital cell, ending in a spot beneath it, second cubital cell long; legs, including coxæ, entirely black; abdomen broad ovate, covered with dense longitudinal striæ; first segment much as in *faustus*; second segment with prominent basal corners and a small subrhomboidal space on basal middle, prolonged posteriorly by a sharp carina to margin of median transverse line which is deep and broadly furcate laterally; base of third and fourth segments deeply incised, their apical margin smooth and polished; ovipositors shorter than abdomen. Length .32 inch.

Two specimens. (Belfrage.)

Bracon Belfragei, n. sp.

♀.—Long, narrow, yellowish sanguineous, shining; head transversely subquadrate, cheeks rather prominent, black, orbits, upper margin of mouth, posterior margin of occiput and middle of mandibles yellowish-red; palpi fringed with long white pubescence; antennæ rather slender, fuscous; thorax smooth and polished, immaculate except a small black spot on each side of pleura beneath; metathorax with a slightly raised central longitudinal line; wings as in *mavoritus*; legs black, coxæ, posterior femora beneath and within, and tibial spurs, pale sanguineous; abdomen long, narrow, first and basal half of second segment coarsely rugose, apical half of second and third segment except apical margins, with dense longitudinal striæ; apical segments smooth and polished; first segment with a large central elevation (the apex of which is polished,) bounded laterally by a deep groove and a blackish carina; second segment long, divided medially by a deep transverse crenulated groove, the basal corners of each half prominent but not striated, a small subrhomboidal space on basal middle of anterior half, prolonged posteriorly by a fine carina which ends in a smooth space an anterior margin of the median transverse groove; ovipositor longer than abdomen. Length .40 inch.

One specimen. (Coll. G. W. Belfrage.)

Bracon novitus, n. sp.

♂.—Pale sanguineous; head black, anterior orbits, face except central black spot, mouth, mandibles except tips, and palpi except basal joint, yellowish-white; antennæ as long as body, slender, entirely black; a large black spot on each side of collar; thorax immaculate; wings pale fuliginous, basal half and base of radial cell darker; legs black, anterior pair, and most of their

tibiæ, pale honey-yellow; abdomen sculptured almost precisely as that of *Belfragei*, extreme apex blackish. Length .23 inch.

One specimen. (Coll. G. W. Belfrage.)

***Bracon texanus*, n. sp.**

♀.—Long, narrow, uniformly yellowish-ferruginous, tips of mandibles black; flagellum dusky, blackish at tips; metathorax rugulose centrally; wings short and narrow, pale fusco-hyaline, a hyaline streak in first cubital cell and a spot beneath it, stigma subhyaline; tips of tarsal joints dusky; abdomen long, narrow; first segment rugose, with a large central prominence nearly as wide as the segment, apical corners depressed; second segment long, divided centrally by a very deep transverse finely crenulated groove, anterior to which the middle is occupied by a large, depressed, subrhomboidal, rugose space with a central longitudinal carina, sides obliquely depressed and obliquely aciculated, on each side of basal margin a small triangular shining space; apical half of second segment obliquely aciculated, smooth and polished on apical margin and with a shining prominence on each basal corner; third segment with fine oblique striæ; apical segments smooth and polished; ovipositor longer than body. Length .33 inch.

Two specimens. (Belfrage.)

***Bracon nuperus*, n. sp.**

♀.—Small, black, shining; head transverse, subbuccate; space beneath eyes, mouth and mandibles honey-yellow; thorax smooth and shining, upper margin of prothorax more or less pale; wings fuliginous, apical half subhyaline, the usual hyaline streak in first cubital cell and spot beneath; legs honey-yellow, coxæ, trochanters, four anterior femora above, apex of four posterior tibiæ and the tarsi, black or blackish; abdomen broad ovate, smooth and shining, the central transverse groove on second segment deep and sinuate, sometimes the prominent disc of first segment and a spot on basal middle of second segment are black; ovipositor as long as body. Length .15 inch.

Three specimens. (Belfrage.)

***Bracon minimus*, n. sp.**

♂ ♀.—Minute, black, shining; mouth honey-yellow; wings pale fuscous, apical half subhyaline; legs blackish, tips of four anterior femora and base of posterior tibiæ dull yellowish; abdomen rather broad ovate, shining, honey-yellow, disc of first segment, a spot on basal middle of the second and a large mark, much reduced in ♂, covering apical half of second segment, and the remaining segments except lateral margin, black; ovipositor of ♀ longer than body. Length .10 inch.

Two specimens. (Coll. G. W. Belfrage.) This is the smallest species of this genus known to me.

***Bracon xanthostigma*, Cress. Proc. Ent. Soc. Phil. iv., p. 303.**

♀.—Yellowish-ferruginous or honey-yellow, head much paler, shining, abdomen opaque; a dusky spot within ocelli; antennæ dusky; pleura beneath, sometimes the disc of metathorax and of first abdominal segment, black; wings pale fusco-hyaline, paler on apical half, stigma larger, pale yellow; tips of posterior tibiæ and the tarsi more or less obfuscated; abdomen broad ovate,

opaque, minutely sculptured, central transverse line on second segment deep and subsinuate, basal middle sometimes blackish; ovipositor as long as body. Length .10—.16 inch.

Six specimens. (Belfrage.) Smaller than the specimens collected in Colorado, with the pleura entirely black beneath.

Rogas texanus.

Aleiodes texanus, Cress. Trans. Am. Ent. Soc. iii., p. 378.

One specimen from Comal Co.

Rogas molestus, n. sp.

♀.—Pale ferruginous, finely punctured, with a short fine pale pubescence; head, palpi, antennæ, metathorax except base and apex, most of pleura, and the legs except coxæ, black; metathorax finely reticulated, with a central and a lateral longitudinal carina; wings hyaline, nervures black; abdomen longitudinally rugose, with a central carina extending from base of first segment nearly to the middle of the third; basal half of third segment longitudinally aciculated, apical half and remaining segments smooth and polished. Length .25 inch.

One specimen. (Coll. G. W. Belfrage.) Allied to *parasiticus*, Norton, but differs by the black legs and unicolorous abdomen.

Rogas graphicus, n. sp.

♂.—Uniformly honey-yellow, clothed with a short whitish pubescence; spot enclosed by ocelli, tips of mandibles, palpi, antennæ entirely, four anterior femora except base, tips of posterior pair and all the tibiæ and tarsi black; metathorax rounded, feebly sculptured, with a sharp central longitudinal carina; wings fuliginous, nervures and stigma black; abdomen opaque, subsericeous, coarsely longitudinally aciculated, the first three segments with a well-defined central longitudinal carina, becoming obsolete before reaching apex of third segment, apical segments almost smooth, shining. Length .35 in.

Two specimens. (Belfrage.)

Rogas mandibularis, n. sp.

♂.—Uniformly honey-yellow, clothed with a short whitish pubescence; head large, transversely subquadrate, buccate; mandibles large, protruding, the oval orifice very large; face transversely striated, prominent medially; spot enclosed by ocelli, tips of mandibles, palpi, antennæ entirely and tips of tarsal joints black or blackish; thorax as in *graphicus*; wings subhyaline, slightly dusky, stigma black; legs rather robust, especially posterior tarsi which are shorter than usual, all the tarsi more or less obfuscated; abdomen as in *graphicus*, except that it is much more finely sculptured, apex of third and the remaining segments smooth and polished. Length .35 inch.

One specimen. (Coll. G. W. Belfrage.)

Rogas atricornis, n. sp.

♀.—Uniformly honey-yellow, clothed with a very short whitish pubescence; tips of mandibles and antennæ except scape, black; thorax and abdomen as in *mandibularis*; wings hyaline, stigma fuscous, very pale at base; tips of tarsi dusky. Length .30—.33 inch.

Four specimens. (Belfrage.) Differs from *graphicus* by the yellow scape, hyaline wings, unicolorous legs, and more finely aciculated abdomen; and from *mandibularis* by the much smaller head and mandibles and paler wings.

Rogas delicatus, n. sp.

♂.—Uniform pale yellowish-testaceous, clothed with a whitish pubescence; head broad, mandibles rather large, black at tips; antennæ as long as head and thorax, apical half pale fuscous; mesothorax even, lines scarcely impressed; metathorax rounded above, feebly sculptured; wings hyaline, iridescent, nervures pale luteous, apical half of stigma blackish, second cubital cell short; legs rather short, subrobust, terminal joint of tarsi black; first and second abdominal segments very minutely and longitudinally aciculated, with a distinct central carina, apex of second and the remaining segments smooth and polished. Length .20 inch.

Two specimens. (Belfrage.) A very delicately colored species.

Rogas pilosus, n. sp.

♀.—Robust, clothed with a short, rather dense, erect, white pubescence; head and thorax ferruginous; antennæ except scape beneath, black; metathorax short, broad, rather abrupt behind, rugulose, base above blackish; wings pale fuliginous, subhyaline at tips, stigma black, yellow at base, second cubital cell shorter than usual, quadrate; legs honey-yellow, tips of posterior femora and of their tibiæ, and the tarsi, more or less blackish; abdomen broad, convex, honey-yellow, shaped much as in *Rhitigaster*, with the segments not coalite, rough with confluent punctures, three basal segments about equal in length, fourth segment broadly rounded at apex; venter deeply vaulted as in *Rhitigaster*. Length .17 inch.

Two specimens. (Belfrage.) A remarkable species, having all the characters of a *Rogas*, except the abdomen which is very similar in shape to that of *Rhitigaster*.

Rogas intermedius.

Alciodes intermedius, Cress. Trans. Am. Ent. Soc. iii., p. 380.

Several specimens. (Belfrage.) Varies much in color.

Exotheus atriventris, n. sp.

♀.—Opaque; head, pro- and mesothorax, tegulæ, scutellum and legs ferruginous; pleura, metathorax and abdomen black; head very full behind the eyes, cheeks smooth and shining, occiput finely and transversely aciculated, face rugulose; antennæ ferruginous, dusky at tips, rather longer than head and thorax; mesothorax with crenulated sutures, median lobe gibbous, truncated anteriorly; scutellum flat, polished; pleura dull rufous, sides longitudinally rugulose, smooth and polished beneath, with a deep central groove; metathorax densely rugose; wings narrow, subhyaline varied with pale fuliginous, stigma black, pale at base; femora robust, trochanters and tarsi paler; abdomen as long as head and thorax, thickened and polished at tip, first and basal half of second segment opaque, covered with dense longitudinal striæ, each with two distant longitudinal carinæ at base, those on first segment cou-

tinued nearly to apex, apical half of second segment smooth and polished; ovipositor longer than body, tips of sheaths thickened. Length .25 inch.

Two specimens. (Belfrage.)

Exotheus rugulosus, n. sp.

♀.—Opaque; fuscous, more or less varied with ferruginous, sparsely clothed with white pubescence; head not full behind the eyes, ferruginous, vertex and occiput dusky, the latter transversely aciculated; antennæ dusky, pale at base; thorax blackish, finely rugulose; prothorax ferruginous; pleura beneath smooth and shining, with a central well-impressed line; tegulæ honey-yellow; wings hyaline, stigma black; legs honey-yellow, the posterior pair more or less tinged with pale fuscous; abdomen fusco-ferruginous, varied with black; first and second segments densely, finely, longitudinally rugose, the first with two longitudinal carinæ at base, the second with a transverse space behind middle, enclosed by a deeply impressed line, extreme apex of segment smooth and polished; ovipositor as long as body. Length .24 inch.

One specimen. (Coll. G. W. Belfrage.)

Hormius? aciculatus, n. sp.

♀.—Fuscous, more or less tinged with dull ferruginous; head ferruginous, with white pubescence, not full behind eyes, vertex depressed; antennæ as long as body, pale at base, dusky at tips; thorax fusco-ferruginous; pleura, metathorax and abdomen covered with dense longitudinal striæ; mesothoracic lobes smooth, the sutures rugose; tegulæ honey-yellow; wings narrow, subhyaline, apical half varied with pale fuliginous; a streak at tip of stigma, an oblique streak in first cubital cell, a spot at base of second cubital cell and a short transverse line at its apex, hyaline; stigma black, whitish at base and apex; legs ferruginous, with sparse erect white hairs; abdomen blackish-fuscous, tinged with reddish at base, sparsely clothed with short erect whitish hairs; sutures deeply incised, the second segment with a deep transverse line a little behind the middle; ovipositor about half the length of abdomen. Length .20 inch.

One specimen. (Coll. G. W. Belfrage.)

Megischus texanus, n. sp.

♀.—Opaque, dull ferruginous; head tinged with yellow; face rather coarsely reticulated; vertex with two transverse carinæ, in front of which are three distant transverse tubercles arranged in a triangle, all tipped with fuscous; occiput finely transversely wrinkled; cheeks smooth and polished; tips of mandibles black; antennæ very slender, dusky at tips; prothorax smooth; mesothorax coarsely rugose; metathorax rugose centrally and at tip; (wings too much damaged to be described;) legs shining, posterior femora, which are short and much swollen, with two large distant acute teeth beneath, the anterior one more robust; posterior tibiæ clavate, deeply pinched and yellowish above middle; first abdominal segment linear, perfectly straight, as long as all the remaining segments combined, the three following segments fuscous at tip, short, subequal in length; ovipositor as long as body, apical half of sheaths black, with a broad white annulus before apex. Length .40 inch.

One specimen from Comal Co.

Dacnusa leviceps, n. sp.

♀.—Black, smooth and shining, with a short pale pubescence, dense on metathorax and first abdominal segment; mandibles red; palpi, scape and tegulæ pale honey-yellow; antennæ longer than body, flagellum fuscous; wings subhyaline, iridescent, stigma long, fuscous, radial nerve thickened and black, radial cell very large; legs pale honey-yellow, coxæ paler, tibiæ darker, posterior tarsi obfuscated; abdomen dull honey-yellow, smooth and shining, first segment black, rugulose; ovipositor as long as abdomen. Length .18 inch.

One specimen. (Coll. G. W. Belfrage.)

Dacnusa minima, n. sp.

♂.—Black, smooth and shining; mandibles, palpi, scape and legs entirely pale yellowish; antennæ as long as body, black; metathorax with dense pale pubescence; wings hyaline, iridescent, radial cell very long; abdomen sometimes tinged with brownish, shining, first segment narrow, longitudinally rugulose. Length .10 inch.

Three specimens. (Belfrage.)

CHALCIDIDÆ.

Leucospis texana.

Leucospis texana, Cress. Trans. Am. Ent. Soc. iv., p. 31, ♂.

Two specimens. (Belfrage.) Differs greatly in form from *affinis*, Say, the abdomen being much shorter, broader at apex and much narrowed to base; the posterior femora much more swollen, being almost circular and having only four distinct teeth, three of which are very large, long and scarcely dilated at base.

Leucospis affinis.

Leucospis affinis, Say, Long's 2d Exped. ii., p. 327. Cress. Trans. Am. Ent. Soc. iv., p. 32.

Five ♂ ♀ specimens. (Belfrage.)

Smicra rufofemorata.

Smicra rufofemorata, Cress. Trans. Am. Ent. Soc. iv., p. 39.

Two ♂ specimens. (Belfrage.)

Smicra torvina.

Smicra torvina, Cress. Trans. Am. Ent. Soc. iv., p. 40.

Two ♀ specimens. (Belfrage.)

Smicra delira.

Smicra delira, Cress. Trans. Am. Ent. Soc. iv., p. 41.

One ♂ specimen. (Coll. G. W. Belfrage.)

Smicra subobsoleta.

Smicra subobsoleta, Cress. Trans. Am. Ent. Soc. iv., p. 42.

One ♂ specimen. (Coll. G. W. Belfrage.)

Smicra sanguiventris.

Smicra sanguiventris, Cress. Trans. Am. Ent. Soc., iv., p. 43.

One ♀ specimen. (Coll. G. W. Belfrage.)

Smicra bioculata.*Smicra bioculata*, Cress. Trans. Am. Ent. Soc. iv., p. 43.

Three ♂ specimens. (Belfrage.)

Smicra barbara.*Smicra barbara*, Cress. Trans. Am. Ent. Soc. iv., p. 47.

Three ♂ specimens. (Belfrage.)

Smicra ignea.*Smicra ignea*, Cress. Proc. Ent. Soc. Phil. iv., p. 92.

One ♀ specimen. (Belfrage.)

Smicra dorsata.*Smicra dorsata*, Cress. Trans. Am. Ent. Soc. iv., p. 49.

One ♀ specimen. (Belfrage.)

Smicra mirabilis.*Smicra mirabilis*, Cress. Trans. Am. Ent. Soc. iv., p. 53.

Two ♂ specimens. (Belfrage.)

Smicra delicata.*Smicra delicata*, Cress. Trans. Am. Ent. Soc. iv., p. 54.

Two ♀ specimens. (Belfrage.)

Chalcis ovata.*Chalcis ovata*, Say, Long's 2d Exped. ii., p. 326. Cress. Trans. Am. Ent. Soc. iv., p. 59.

Four specimens. (Belfrage.)

Chalcis tegularis.*Chalcis tegularis*, Cress. Trans. Am. Ent. Soc. iv., p. 60.

Two ♀ specimens. (Belfrage.)

Chalcis pedalis.*Chalcis pedalis*, Cress. Trans. Am. Ent. Soc. iv., p. 60.

One ♀ specimen. (Coll. G. W. Belfrage.)

Phasgonophora sulcata.*Phasgonophora sulcata*, Westw. Griff. Cuv. Reg. Anim. xv., p. 432; pl. 77. fig. 2.

One ♀ specimen. (Boll.)

Antigaster mirabilis.*Antigaster mirabilis*, Walsh, Am. Ent. vol. ii.

One specimen. (Belfrage.)

PROCTOTRUPIDÆ.

Dryinus atriventris, n. sp.

♀.—Ferruginous, with pale glittering pubescence; head much broader than thorax; face, mandibles and base of scape beneath pale yellowish; tips of antennæ blackish; pleura with dense silvery pubescence; metathorax rugulose, posterior face depressed and transversely aciculated; wings hyaline, with a dusky band beneath stigma; posterior tibiæ blackish at tips, their tarsi pale; abdomen black, smooth and polished. Length .18 inch.

One specimen. (Coll. G. W. Belfrage.)

Gonatopus? alatus, n. sp.

♀.—Pale ferruginous, head shining, much broader than thorax, transversely compressed; front flat; eyes large, prominent, ovate; clypeus transverse, subconvex, bituberculate at tips; occiput concave; apical margin of clypeus, mandibles and scape beneath, whitish; antennæ slender, as long as head and thorax, 10-jointed, first joint short and robust, second small, scarcely half the length of first, third very long and slender, more than twice the length of first and second together, black, scape and two or three apical joints yellowish; prothorax elongate, as long as metathorax, convex, subtruncate anteriorly, narrowed and somewhat constricted posteriorly; mesothorax short, convex, fusco-ferruginous; metathorax elongate, rounded behind, longitudinally rugose at base above; wings narrow, scarcely reaching tips of posterior femora, fuscous, with a large rounded hyaline spot beneath base of stigma nearly as broad as the wing; legs rather paler than body, anterior pair very long, coxæ and trochanters as long as femora which are longer than tibiæ, tarsi chelate; four posterior legs much shorter than anterior pair, all the femora much thickened toward base; abdomen elongate, smooth and shining. Length .23 inch.

Two specimens. (Belfrage.) I have with doubt referred this remarkable insect to the genus *Gonatopus*, from which it differs by the more elongate slender form and by having wings.

Epyris læviventris, n. sp.

♂.—Black, immaculate, shining, clothed with a short glittering pubescence; head large, subquadrate, with dense coarse punctures; clypeus and mandibles faintly tinged with rufous; antennæ sericeous with pale pile; prothorax rugous; mesothorax polished, with sparse deep punctures; scutellum polished; metathorax subquadrate, abrupt laterally and abruptly truncate at tip, minutely transversely rugulose; pleura coarsely punctured; tegulæ piecous; wings tinged with fuscous; legs clothed with glittering pubescence, tarsi fuscous; abdomen elongate ovate, smooth and polished, impunctured, apex clothed with whitish pubescence. Length .30 inch.

Two specimens. (Belfrage.)

Epyris analis, n. sp.

♀.—Head and thorax dark metallic green, shining, sparsely clothed with pale pubescence; head subquadrate, flattened, rather closely and finely punctured; mandibles dark ferruginous, palpi whitish; antennæ short, robust, ferruginous; pro- and mesothorax sparsely and finely punctured; metathorax

black, quadrate, abrupt laterally and abruptly truncate at tip, above minutely and transversely aciculated, the disc with four or five approximate longitudinal carinæ, posterior face transversely aciculated, the sides longitudinally so; tegulæ ferruginous; wings tinged with yellowish-fuscous; legs short, robust, pale ferruginous, anterior coxæ black, all the femora incrassate; abdomen elongate ovate, smooth and polished, black, immaculate, apex ferruginous. Length .26 inch.

One specimen. (Coll. G. W. Belfrage.) A very conspicuous species, resembling *rufipes* in general form, but much larger and differently colored.

Epyris rufipes.

Bethylus rufipes, Say. Long's 24 Exped. ii., p. 329.

Two specimens. (Belfrage.)

DORYLIDÆ.

Labidus Sayi.

Labidus Sayi, Hald. Stausb. Salt Lake Exped. Append. p. 367, pl. 9, fig. 1—3.

Three ♂ specimens. (Belfrage; Heiligbrodt.)

Labidus mexicanus.

Labidus mexicanus, Smith. Brit. Mus. Cat. vii. p. 7.

Eight ♂ specimens. (Belfrage.)

Labidus Harrisii.

Labidus harrisii, Hald. Stansb. Salt Lake Exped. Append. p. 367, pl. 9, fig. 4.

Eleven ♂ specimens. (Belfrage.)

Labidus nigrescens, n. sp.

♂.—Black, clothed with a short appressed yellowish silky pubescence, long on vertex and face; eyes smaller than usual, prominent; ocelli approximate, a broad space between them and the eyes; before anterior ocellus two prominent longitudinal ridges; mandibles robust, reddish at tips; antennæ as long as head and thorax, dark ferruginous; thorax above gibbous anteriorly and posteriorly, rather closely and finely punctured; mesothorax with a central longitudinal ridge extending from disc to anterior margin; wings uniformly pale fuliginous, stigma tolerably large and with the nervures black, marginal cell elongate triangular, pointed at apex, second submarginal cell irregularly elongate quadrangular, narrower at apex, receiving the recurrent nervure about one-third from base; legs slender, rufo-piceous, knees and tarsi paler, tip of posterior tarsi not quite reaching to apex of abdomen; abdomen strongly sericeous, densely and minutely punctured, apical margin of the segments slightly constricted and rufo-piceous, the peduncle very transverse, base broadly not deeply concave with sides rounded, apex truncate, pubescent, angles subobtuse, lateral margin not raised, apical segment rounded, not compressed, except at the extreme apex which is acute and ferruginous, apical ventral segment ferruginous, produced at tip into a bilobate, bicarinate, scale-like process, the tip of each lobe acute and somewhat recurved. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.)

Labidus minor, n. sp.

♂.—Rufo-testaceous, covered with a very short appressed yellowish silky pile; head black, face and mandibles ferruginous; eyes large and prominent; ocelli prominent, glassy, each posterior ocellus much nearer to the eye than to each other; mandibles long, slender, curved, acute at tips; two short longitudinal obtuse ridges above insertion of antennæ; antennæ not as long as head and thorax, rufo-testaceous, subcompressed at tips, scape robust; thorax strongly gibbous in front, much less so behind, closely and finely punctured, more or less tinged with brown above; mesothorax with a well-impressed central longitudinal line on anterior half and a finely impressed line on each side over the tegulæ; wings hyaline, iridescent, stigma conspicuous, fuscous, nervures hyaline, marginal cell elongate triangular, pointed at tip, second submarginal cell long and narrow, base and apex rounded, receiving the recurrent nervure a little before the middle; legs slender, shorter than usual; abdomen subcompressed, sericeous, peduncle transversely quadrangular and subconvex, base declivous and slightly concave, sides rounded, apex truncate, the angles subacute, sides scarcely raised; apical ventral segment furnished with two stout acute recurved teeth, between which is a minute acute tooth, sometimes indistinct. Length .35 inch.

Nine specimens. (Belfrage.) Smaller than *Harrisii* which it closely resembles, but the pubescence on the former species is much longer and coarser, the antennæ longer, the wings darker, etc.

Labidus Melshæmeri.

Labidus Melshæmeri, Hald. Stansb. Salt Lake Exped. Append. p. 368, pl. 9, fig. 7.

Three ♂ specimens. (Belfrage.)

MUTILLIDÆ.

Mutilla Grotei.

Mutilla Grotei, Blake, Trans. Am. Ent. Soc. iii. p. 228.

Four ♂ specimens. (Belfrage; Boll.)

Mutilla Promethea.

Mutilla Promethea, Blake, Trans. Am. Ent. Soc. iii., p. 229.

Three ♂ specimens. (Belfrage; Boll.)

Mutilla Sayi.

Mutilla Sayi, Blake, Trans. Am. Ent. Soc. iii., p. 229.

Three ♂ specimens. (Belfrage.)

Mutilla ornativentris.

Mutilla ornativentris, Cress. Proc. Ent. Soc. Phil. iv., p. 438.

Seven ♀ specimens. (Belfrage; Boll.)

Mutilla scrupea.

Mutilla scrupea, Say, Bost. Journ. Nat. Hist. i., p. 297.

One ♂ specimen. (Belfrage.)

Mutilla Copano.

Mutilla Copano, Blake, Trans. Am. Ent. Soc. iii., p. 232.

One ♂ specimen. (Belfrage.)

Mutilla scæva.

Mutilla scæva, Blake, Trans. Am. Ent. Soc. iii., p. 232.

One ♂ specimen from Comal Co.

Mutilla pennsylvanica.

Mutilla pennsylvanica, St. Farg. Hym. iii., p. 628.

Four ♂ specimens. (Boll; Heiligbrodt.)

Mutilla auripilis.

Mutilla auripilis, Blake, Trans. Am. Ent. Soc. iii., p. 233.

Four ♂ specimens. (Belfrage.)

Mutilla Orcus.

Mutilla Orcus, Cress. Proc. Ent. Soc. Phil. iv., p. 428.

Twelve ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Mutilla Gorgon.

Mutilla Gorgon, Blake, Trans. Am. Ent. Soc. iii., p. 233.

Four ♀ specimens. (Belfrage; Boll.)

Mutilla Zelaya.

Mutilla Zelaya, Blake, Trans. Am. Ent. Soc. iii., p. 234.

Three ♂ ♀ specimens. (Belfrage.)

Mutilla Comanche.

Mutilla Comanche, Blake, Trans. Am. Ent. Soc. iii., p. 234.

Three ♂ ♀ specimens from Comal Co.

Mutilla Clotho.

Mutilla Clotho, Blake, Trans. Am. Ent. Soc. iv., p. 72.

One ♀ specimen. (Boll. Coll. Mus. Comp. Zoology.)

Mutilla aureola.

Mutilla aureola, Cress. Proc. Ent. Soc. Phil. iv., p. 385.

One ♀ specimen. (Heiligbrodt.)

Mutilla Leda.

Mutilla Leda, Blake, Trans. Am. Ent. Soc. iv., p. 72.

Two ♀ specimens. (Belfrage; Boll.)

Mutilla fulvohirta.

Mutilla fulvohirta, Cress. Proc. Ent. Soc. Phil. iv., p. 433.

One ♂ specimen. (Boll.)

Mutilla Chiron.

Mutilla Chiron, Blake, Trans. Am. Ent. Soc. iv., p. 72.

Two ♀ specimens. (Belfrage.)

Mutilla Ægina.

Mutilla Ægina, Cress. Proc. Ent. Soc. Phil. iv., p. 435.

Two ♀ specimens. (Boll.)

Mutilla Bellona.

Mutilla Bellona, Cress. Proc. Ent. Soc. Phil. iv., p. 434.

One ♀ specimen. (Belfrage.)

Mutilla occidentalis.

Mutilla occidentalis, Linn. Blake, Trans. Am. Ent. Soc. iii., p. 236.

Five ♂ ♀ specimens. (Boll.)

Mutilla Creusa.

Mutilla Creusa, Cress. Proc. Ent. Soc. Phil. iv. p. 431.

Eleven ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Mutilla bioculata.

Mutilla bioculata, Cress. Proc. Ent. Soc. Phil. iv., p. 431.

Four ♂ specimens. (Belfrage; Boll.)

Mutilla Castor.

Mutilla Castor, Blake, Trans. Am. Ent. Soc. iii., p. 237.

Five ♂ specimens. (Boll.)

Mutilla fenestrata.

Mutilla fenestrata, St. Farg. Hym. iii., p. 627.

Six ♂ specimens. (Belfrage; Boll; Heiligbrodt.)

Mutilla Creon.

Mutilla Creon, Blake, Trans. Am. Ent. Soc. iv., p. 73.

One ♂ specimen. (Coll. G. W. Belfrage.)

Mutilla Bexar.

Mutilla Bexar, Blake, Trans. Am. Ent. Soc. iii., p. 238.

Two ♂ specimens. (Belfrage.)

Mutilla Waco.

Mutilla Waco, Blake, Trans. Am. Ent. Soc. iii., p. 238.

Four ♀ specimens. (Belfrage.)

Mutilla Admetus.

Mutilla Admetus, Blake, Trans. Am. Ent. Soc. iv. p. 74.

One ♂ specimen from Comal Co.

Mutilla macra.

Mutilla macra, Cress. Proc. Ent. Soc. Phil. iv., p. 429.

One ♂ specimen. (Boll.)

Mutilla canella.

Mutilla canella, Blake, Trans. Am. Ent. Soc. iii., p. 239.

One ♂ specimen. (Belfrage.)

Mutilla macilenta.

Mutilla macilenta, Blake, Trans. Am. Ent. Soc. iii., p. 239.
One ♂ specimen. (Belfrage.)

Mutilla 4-guttata.

Mutilla 4-guttata, Say, West. Quar. Rep. ii. p. 74.
Five ♀ specimens. (Boll; Heiligbrodt.)

Mutilla ferrugata.

Mutilla ferrugata, Fabr. Blake, Trans. Am. Ent. Soc. iii., p. 246.
Fifteen ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Mutilla mutata.

Mutilla mutata, Blake, Trans. Am. Ent. Soc. iii., p. 247.
Two ♀ specimens. (Belfrage; Boll.)

Mutilla scævola.

Mutilla scævola, Blake, Trans. Am. Ent. Soc. iii., p. 247.
Two ♀ specimens. (Belfrage.)

Mutilla balteola.

Mutilla balteola, Blake, Trans. Am. Ent. Soc. iii., p. 248.
Two ♀ specimens. (Belfrage; Boll.)

Mutilla propinqua.

Mutilla propinqua, Cress. Proc. Ent. Soc. Phil. iv., p. 433.
One ♂ specimen. (Belfrage.)

Mutilla Oceola.

Mutilla Oceola, Blake, Trans. Am. Ent. Soc. iii., p. 248.
One ♂ specimen. (Belfrage.)

Mutilla flavida.

Mutilla flavida, Blake, Trans. Am. Ent. Soc. iii., p. 249.
One ♂ specimen. (Belfrage.)

Mutilla grandiceps.

Mutilla grandiceps, Blake, Trans. Am. Ent. Soc. iv., p. 74.
Two ♂ ♀ specimens. (Coll. G. W. Belfrage.)

Mutilla Gila.

Mutilla Gila, Blake, Trans. Am. Ent. Soc. iii., p. 250.
One ♂ specimen. (Coll. G. W. Belfrage.)

Mutilla simillima.

Mutilla simillima, Smith, Brit. Mus. Cat. iii., p. 62.
Four ♀ specimens. (Belfrage; Boll.)

Mutilla brazoria.

Mutilla brazoria, Blake, Trans. Am. Ent. Soc. iii., p. 255.
Three ♀ specimens. (Belfrage.)

Mutilla Electra.

Mutilla Electra, Blake, Trans. Am. Ent. Soc. iv., p. 74.

Two ♀ specimens. (Boll.)

Mutilla albopilosa.

Mutilla albopilosa, Blake, Trans. Am. Ent. Soc. iv., p. 74.

One ♀ specimen from Comal Co.

Agama imperialis.

Agama imperialis, Blake, Trans. Am. Ent. Soc. iii., p. 260.

Three ♂ specimens. (Belfrage.)

Agama Nokomis.

Agama Nokomis, Blake, Trans. Am. Ent. Soc. iii., p. 260.

Four ♂ specimens. (Belfrage.)

Agama Danaus.

Agama Danaus, Blake, Trans. Am. Ent. Soc. iii., p. 261.

Six ♂ specimens. (Belfrage.)

Agama melicausa.

Agama melicausa, Blake, Trans. Am. Ent. Soc. iii., p. 261.

Two ♂ specimens. (Belfrage.)

Agama Tapajos.

Agama Tapajos, Blake, Trans. Am. Ent. Soc. iii., p. 162.

Ten ♂ specimens. (Belfrage.)

Agama pallida.

Agama pallida, Blake, Trans. Am. Ent. Soc. iii., p. 263.

Four ♂ specimens. (Belfrage.)

Agama hyalina.

Agama hyalina, Blake, Trans. Am. Ent. Soc. iii., p. 263.

Two ♂ specimens. (Belfrage.)

Agama Belfragei.

Agama Belfragei, Blake, Trans. Am. Ent. Soc. iii., p. 263.

Six ♂ specimens. (Coll. G. W. Belfrage.)

Agama Aulus.

Agama Aulus, Blake, Trans. Am. Ent. Soc. iv., p. 75.

One ♂ specimen. (Coll. G. W. Belfrage.)

Agama minuta.

Agama minuta, Blake, Trans. Am. Ent. Soc. iv., p. 76.

One ♂ specimen. (Coll. G. W. Belfrage.)

Agama juxta.

Agama juxta, Blake, Trans. Am. Ent. Soc. iv., p. 76.

One ♂ specimen. (Coll. G. W. Belfrage.)

Agama attenuata.

Agama attenuata, Blake, Trans. Am. Ent. Soc. iv., p. 76.

One ♂ specimen. (Coll. G. W. Belfrage.)

SCOLIADÆ.

Myzine sexcincta.

Scolia sexcincta, Fabr. Syst. Ent., p. 356. (For synonymy see Proc. Ent. Soc. Phil. iv., p. 442.)

Twelve ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Myzine costata.

Meria costata, Say, Bost. Journ. Nat. Hist. i., p. 361.

Two ♀ specimens found on Shumach flowers in August. (Belfrage; Boll.) This is doubtless the ♀ of *Myzine hamatus*, Say.

Myzine dubiosa, n. sp.

♀.—Black, shining, clothed with sparse glittering white hairs, head and thorax with large scattered punctures; a broad band immediately above antennæ, anterior orbital line, narrow line behind eyes, and a spot on middle of occiput, yellow; clypeus, mandibles except tips, and scape ferruginous, flagellum reddish beneath; large subtriangular spot on each side of prothorax, a short submarginal line behind, large spot on disc of mesothorax, a spot over tegulæ, band on scutellum, postscutellum, a spot, indented anteriorly, on each side of mesothorax, a small spot on basal middle, and two spots on pleura, that beneath tegulæ large and subtriangular, all yellow; the surface around the yellow basal spot of metathorax rugose, the posterior face concave, the surrounding surface faintly transversely wrinkled; tegulæ dull testaceous, basal margin yellow; wings pale yellowish hyaline, the costa near apex very faintly dusky; legs black, femora tinged with reddish especially beneath, tibiæ and tarsi fulvo-ferruginous, anterior tibiæ pale in front, posterior coxæ with a yellow spot; abdomen smooth and polished, subiridescent, very sparsely punctured; first segment with two, nearly connected, subapical yellow spots; second segment with a large subbasal yellow spot on each side; three following segments with a basal yellow band, narrowed medially and subinterrupted; apical segment flattened, longitudinally striated, tinged with sanguineous; second and third ventral segments, each with a rounded lateral yellow spot. Length .50 inch.

One specimen, found on Shumach flowers with the preceding species. (Coll. G. W. Belfrage.) Closely allied to *sexcincta* ♀, but very much smaller, and with clearer wings.

Myzine texana, n. sp.

♀.—Black, shining, with large scattered punctures, more dense on face and prothorax, clothed with sparse white hairs, especially thick on cheeks and legs; a broad band immediately above antennæ, confluent with anterior orbital line which continues narrowly to middle of occiput, and a line behind eyes, also connected to the spot on middle of occiput by an arcuate narrow line, lemon-yellow; mandibles except tips and scape beneath ferruginous; a large spot on each side of prothorax, a large triangular spot on disc of mesothorax, a spot above tegulæ, band on scutellum, postscutellum, a large spot acutely indented anteriorly on each side of metathorax, and two spots on pleura the posterior one small and rounded, all lemon-yellow; anterior margin of mesothorax opaque; metathorax behind with a pale sericeous pile, base opaque, the

disc rugose; tegulæ pale testaceous, basal margin yellow; wings hyaline, faintly tinged with yellow, nervures pale fulvous; legs as in *dubiosa*, with the anterior tibiæ yellow in front, and a yellow spot on tips of their femora beneath; abdomen smooth, polished, subiridescent, very sparsely punctured, marked as in *dubiosa*, the color lemon-yellow, the spots on first segment connected by a narrow line at base, the band on fifth segment interrupted medially; apical segment dull black, longitudinally striated; venter as in *dubiosa*. Length .65 inch.

One specimen from Comal Co. Easily separated from *sexcineta* by the clear wings and triangular yellow line on head above.

Myzine rufiventris, n. sp.

♂.—Black, shining, clothed with a short, erect glittering white pubescence, punctures somewhat dense and shallow, fine and dense on face, sparse on occiput; mandibles and tegulæ piceous; metathorax rounded, coarsely reticulated; prothorax larger than in *sexcineta*, rounded above and but slightly truncate anteriorly; wings dark fuscous, paler at apex, second marginal cell subtriangular, receiving the first recurrent nervure before the middle, the third submarginal obliquely quadrate, receiving the second recurrent nervure also before the middle; legs black, with pale glittering hairs; abdomen shining, yellow-ferruginous, basal segment and anal hook black. Length .55 inch.

One specimen. (Boll. Coll. Mus. Comp. Zoology.)

Tiphia inornata.

Tiphia inornata, Say, Long's 2d Exped. ii., p. 331.

Ten ♂ ♀ specimens. (Belfrage; Boll.)

Scolia bicincta.

Scolia bicincta, Fabr. Ent. Syst. ii., p. 234.

Five ♂ ♀ specimens. (Boll.)

Scolia dubia.

Scolia dubia, Say, Bost. Journ. Nat. Hist. i., p. 364.

Var. *Scolia hamatodes*, Burm. Afb. Nat. Ges. Halle, i., p. 33.

Twelve ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Scolia nobilitata.

Scolia nobilitata, Fabr. Syst. Piez., p. 244.

Seven ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Scolia Lecontei.

Scolia (Discolia) Lecontei, Cress. Trans. Am. Ent. Soc. i., p. 376.

Eleven ♂ ♀ specimens. (Belfrage; Boll.) Abundant in Western Texas from August to October. Mr. Belfrage writes that they rest during the night and chilly weather in clusters, closely attached to stems of grass and plants.

Elis ephippium.

Scolia ephippium, Say, Bost. Journ. Nat. Hist. i., p. 363.

One ♀ specimen. (Heiligbrodt.)

Elis 4-maculata.

Vespa 4-maculata, Drury, Ins. ii. pl. 39, fig. 2, ♀.

Scolia 4-notata, Fabr. Syst. Piez., p. 240, ♂.

Four ♂ ♀ specimens. (Boll; Heiligbrodt.)

Elis plumipes.

Sphex plumipes, Drury, Ins. i. pl. 44, fig. 5, ♀.

Scolia radula, Fabr. Ent. Syst. ii., p. 232, ♂.

Six ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Elis texensis.

Elis texensis, Sauss. Ann. Soc. Ent. Fr. 3 sér. vi., p. 224.

One ♂ specimen. (Belfrage.)

Elis Xantiana.

Elis Xantiana, Sauss. Ann. Soc. Ent. Fr. 4 sér. iii., p. 18.

Scolia regina, Cress. Proc. Ent. Soc. Phil. iv., p. 447.

Two ♂ ♀ specimens. (Belfrage.)

Elis lupina, n. sp.

♀.—Black, shining, with large scattered punctures; head ferruginous, cheeks and occiput black, clothed with dense golden fulvous pubescence, also the face; antennæ black, scape ferruginous; prothorax tinged with ferruginous, with a triangular yellow spot on each side; disc of mesothorax and of scutellum smooth, impunctured, a well-impressed line over tegulæ; metathorax very short, broadly truncate behind, the posterior face mostly dull ferruginous, sparsely punctured; pleura with long, rather dense golden pubescence; tegulæ fulvous; wings fuliginous, strongly violaceous, costa broadly dark fuliginous, costal nerve pale fulvous; three submarginal cells, the second receiving two recurrent nervures; legs fulvo-ferruginous, with golden hairs; abdomen black, shining, sparsely, deeply punctured, base of first segment and extreme apical margin of remaining segments with golden pubescence, otherwise the pubescence and fringe above is black; segments 1—4 each with two yellow spots, those on first and fourth segments narrow and nearly meeting on disc, those on second and third segments larger and somewhat rounded; apical segment brownish, rugose; venter fusco-ferruginous, the segments fringed at apex with long dense golden pubescence. Length .65 inch.

One specimen. (Boll. Coll. Mus. Comp. Zoology.) This is allied to *Xantiana*, Sauss., ♀, but is larger and more robust, the black color predominating, whereas in *Xantiana* the ferruginous color predominates.

POMPILIDÆ.

Pompilus philadelphicus.

Pompilus philadelphicus, St. Farg. Hym. iii., p. 423.

Fourteen ♂ ♀ specimens. (Belfrage; Boll.) One ♂ specimen, which may be named var. *sericatus*, has the head, thorax, legs and abdomen covered with a dense pale sericeous pile.

Pompilus maurus.*Pompilus maurus*, Cress. Trans. Am. Ent. Soc. i., p. 88.

One ♂ specimen. (Belfrage.)

Pompilus scelestus.*Pompilus scelestus*, Cress. Proc. Ent. Soc. Phil. iv., p. 451.

Two ♀ specimens. (Belfrage.)

Pompilus tenebrosus.*Pompilus tenebrosus*, Cress. Proc. Ent. Soc. Phil. iv., p. 453.

Ten ♂ ♀ specimens. (Belfrage; Boll.)

Pompilus ingenuus.*Pompilus ingenuus*, Cress. Trans. Am. Ent. Soc. i., p. 89.

Three ♂ specimens. (Belfrage.)

Pompilus cylindricus.*Pompilus cylindricus*, Cress. Trans. Am. Ent. Soc., i., p. 92.

One ♂ specimen. (Belfrage.)

Pompilus tropicus.*Sphex tropicus*, Linn. Syst. Nat. i., p. 945.

Three ♀ specimens. (Belfrage, Boll; Heiligbrodt.)

Pompilus atrox.*Pompilus atrox*, Dahlb. Hym. Eur. i., p. 63. Cress. Trans. Am. Ent. Soc. i., p. 98.

Four ♂ ♀ specimens. (Belfrage; Boll.)

Pompilus marginatus.*Pompilus marginatus*, Say, Long's 2d Exped. ii., p. 333.

Six ♀ specimens. (Belfrage; Boll.)

Pompilus americanus.*Pompilus americanus*, Beauv. Ins. Afr. et Am., p. 117, pl. 3, fig. 6.

Three ♀ specimens. (Belfrage; Boll.)

Pompilus algidus.*Pompilus algidus*, Smith, Brit. Mus. Cat. iii., p. 158.

Seven ♂ ♀ specimens. (Boll; Heiligbrodt.)

Pompilus interruptus.*Ceropaltes interruptus*, Say, Bost. Journ. Nat. Hist. i., p. 365.

Five ♂ ♀ specimens. (Belfrage; Boll.)

Pompilus ferrugineus.*Ceropaltes ferrugineus*, Say, Long's 2d Exped. ii., p. 334.

Five ♂ ♀ specimens. (Boll; Heiligbrodt.)

Priocnemis fulvicornis.*Priocnemis fulvicornis*, Cress. Trans. Am. Ent. Soc. i., p. 112.

Ten ♂ ♀ specimens. (Belfrage; Boll.)

Priocnemis unifasciatus.

Pompilus unifasciatus, Say, Amer. Ent. pl. 42.

Four ♀ specimens. (Boll.)

Priocnemis terminatus.

Pompilus terminatus, Say, Amer. Ent. pl. 42.

Six ♂ ♀ specimens. (Belfrage; Boll.) A common species found on flowers of the Wild Sage (*Croton capitatum*).

Priocnemis Heiligbrodtii, n. sp.

♀.—Robust, black, opaque, head and thorax velvety, clothed with a scattering black pubescence; head, when viewed from above, transversely subquadrate, full behind the eyes; anterior margin of clypeus broadly subarcuate; labrum and mandibles piceous brown, the latter short and very robust; antennæ short and thick, not reaching beyond tip of scutellum, brown sericeous; metathorax rounded above, abruptly so behind; posterior margin of prothorax arcuate; wings orange ferruginous, apical margin narrowly fuliginous; marginal cell pointed at tip, second submarginal cell scarcely half the length of first, subquadrate, rounded towards base of wing, receiving the first recurrent nervure a little before the middle, third submarginal cell nearly twice larger than the second, receiving the recurrent nervure at the middle; legs robust, shining, sparsely clothed with black hairs; abdomen oblong-ovate, smooth and shining, sparsely punctured, sides and apex with black hairs. Length .70 inch.

One specimen. (Coll. L. Heiligbrodt.) Allied to *terminalis* and *texanus*, from which it is at once distinguished by the shorter and stouter antennæ and legs, and smooth shining abdomen.

Priocnemis texanus, n. sp.

♀.—Velvety-black; apical margin of clypeus arcuate; posterior margin of prothorax angular; metathorax rounded; wings bright orange-yellow, more or less fiery, the apex fuliginous, neuration much as in *terminatus*, with the marginal cell more acute at tip; abdomen with a slight bluish or purplish reflection, sometimes scarcely perceivable. Length .60—.80 inch.

♂.—Much smaller, slender, with the wings fusco-ferruginous, sometimes broadly fuliginous at apex. Length .55 inch.

Ten ♂ ♀ specimens. (Belfrage; Boll.) Closely allied to *terminalis*, but larger, with the clypeus less arcuate at apex and the posterior margin of prothorax more angular; the wings are also darker.

Priocnemis flammipennis.

Pompilus flammipennis, Smith, Brit. Mus. Cat. iii., p. 155.

Four ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Priocnemis conicus.

Pompilus conicus, Say, Bost. Journ. Nat. Hist. i., p. 305.

One ♀ specimen. (Belfrage.)

Prionemesis validus.

Prionemesis validus, Cress. Trans. Am. Ent. Soc. i., p. 116.

Two ♀ specimens. (Belfrage.)

Prionemesis nothus.

Prionemesis nothus, Cress. Trans. Am. Ent. Soc. i., p. 118.

One ♀ specimens. (Belfrage.)

Prionemesis nuperus.

Prionemesis nuperus, Cress. Trans. Am. Ent. Soc. i., p. 118.

One ♀ specimen. (Belfrage.)

Prionemesis facetus, n. sp.

♀.—Small, uniformly pale ferruginous, shining; antennæ paler, sericeous; posterior margin of prothorax arcuate; metathorax smooth, convex, closely and minutely punctured; wings dusky hyaline, a fuscous band on apical fourth, a large spot covering marginal, second and third submarginal and apex of discoidal cells and the extreme apex also fuscous, marginal cell long, lanceolate, apex acute, the second and third submarginal cells much as in *Agenia accepta*, Cress. (Trans. etc. i., p. 130, fig. 11); legs long, slender, posterior tarsi fuscous; abdomen polished, dusky towards apex which is clothed with yellowish hair. Length .27 inch.

One specimen. (Coll. G. W. Belfrage.)

Agenia Belfragei, n. sp.

♂.—Black, opaque, clothed with short black pubescence; tips of mandibles ferruginous; head not wider than thorax; antennæ robust, gradually narrowed to apex; thorax long, subcompressed, sides parallel, posterior margin of prothorax arcuate; metathorax rounded, finely and densely punctured; wings ample, dark yellow, tinged with dusky, especially at apex which is narrowly margined with fuliginous; abdomen very closely and minutely punctured, sutures between first, second and third segments constricted, apex emarginate, fringed with long black pubescence. Length .60 inch.

Two specimens. (Belfrage.) Easily known by the yellow wings and long black body.

Agenia architectus.

Pompilus architectus, Say, Bost. Journ. Nat. Hist. i., p. 303.

One ♀ specimen. (Belfrage.)

Agenia mellipes.

Pompilus mellipes, Say, Bost. Journ. Nat. Hist. i., p. 304.

One ♀ specimen. (Heiligbrodt.)

Agenia longa, n. sp.

♀.—Form long, narrow, parallel, black, impunctured, thinly covered with a fine pale sericeous pile; anterior margin of clypeus shining, truncate; mandibles piceous; antennæ as long as head and thorax, slender; thorax long, sides parallel, posterior margin of prothorax subangular; metathorax long, convex, even; wings smoky hyaline, darker at tips, marginal cell broadly rounded at tip, not reaching beyond third submarginal cell, second submar-

ginal truncate at tip, pointed at base, third submarginal as long as second, narrowed to one-half its length towards marginal, both submarginal cells receiving the recurrent nervures in the middle; legs long, slender, the posterior pair very long; abdomen about as long as thorax, subpetiolate, smooth, shining, fulvo-ferruginous, fourth and following segments fuscous. Length .38 inch.

One specimen. (Coll. G. W. Belfrage.)

Agenia accepta.

Agenia accepta, Cress. Trans. Am. Ent. Soc. i., p. 130.

One ♀ specimen. (Belfrage.)

Parapompilus lævifrons.

Ferricola lævifrons, Cress. Proc. Bost. Soc. Nat. Hist. vii., p. 376.

Two ♀ specimens. (Belfrage.)

Parapompilus vicinus.

♀.—Black, opaque, with a more or less strong violaceous reflection; head covered with a pile like that on thorax, but less dense and faintly purplish; mandibles piceous; metathorax deeply excavated posteriorly; wings violaceous black; abdomen much as in *lævifrons*, less compressed at apex. Length .53 inch.

Three specimens. (Belfrage.) Allied to *lævifrons*, but much smaller and the head not smooth and polished as in that species, but with a clothing as on thorax.

Parapompilus texanus, n. sp.

♀.—Black, opaque, with a purplish sericeous reflection in certain lights, head smooth and shining; metathorax transversely subconcave on posterior face; wings violaceous-black; legs sericeous; abdomen beyond first segment orange-ferruginous, covered with a dense silvery sericeous pile; venter blackish. Length .65—.70 inch.

Three ♀ specimens. (Belfrage.)

Parapompilus contiguus, n. sp.

♀.—Black, opaque; head shining, vertex thinly covered with a reddish-brown pile, sides of face and of clypeus with a silvery-cinereous pile; mandibles dull reddish at tips; pro- and mesothorax fulvous, with a golden sericeous pile; scutellum brown-black; metathorax above stained with dull fulvous; wings violaceous black, posterior pair paler; legs entirely black, sericeous, especially beneath; abdomen not longer than head and thorax, second and third segments except narrow apical margin of the latter which is brown, fulvous, with a golden reflection; first and fourth segments deep black, two apical segments silvery. Length .65 inch.

One specimen. (Boll. Coll. Mus. Comp. Zool.) Closely allied to *Mariæ*, Cresson.

Parapompilus legatus.

Pompilus? legatus, Cress. Trans. Am. Ent. Soc. i., p. 109.

Two ♀ specimens. (Boll.)

Notocyphus dorsalis, n. sp.

♀.—Long, narrow, black, subsericeous, abdomen shining, apex pointed and subcompressed; vertex, occiput, prothorax above, mesothorax, scutellum, post-scutellum and metathorax above fulvo-ferruginous; wings violaceous-black. Length .60—1 inch.

Four specimens. (Belfrage.) Closely allied to *plagiatus*, Smith, of which it may be a variety. This and the next species were found on Solidago flowers in September and October.

Notocyphus texanus, n. sp.

♂.—Black, sericeous, head and thorax in front with short thin black pubescence; anterior orbits, short narrow line on posterior orbits, posterior margin of prothorax, broader medially, a dot on scutellum, a band near base of third abdominal segment slightly interrupted centrally, and a spot on apical segment, whitish; metathorax and posterior coxæ with a silvery sericeous pile, more obvious in certain lights; wings blackish, with a beautiful violet iridescence; abdomen narrow, subfusiform. Length .60—.73 inch.

Four specimens. (Belfrage.) Allied to *albopictus*, Smith.

Planiceps feralis, n. sp.

♀.—Small, black with a violaceous reflection, clothed with a very short, silvery cinereous pile; antennæ short, robust; clypeus rounded at apex; posterior margin of prothorax broadly arcuate, lateral angles of metathorax densely clothed with a silvery-white pubescence; wings hyaline, apex dusky; legs densely silvery sericeous at base; abdomen about as long as thorax, narrow, subcompressed at tip, the three basal segments except apical margins covered with a silvery cinereous pile, more obvious in certain lights. Length .33 inch.

One specimen. (Coll. G. W. Belfrage.)

Aporus fasciatus.

Aporus fasciatus, Smith, Brit. Mus. Cat. iii. p. 175.

One ♂ specimen. (Belfrage.)

Aporus minimus, n. sp.

♂.—Very small, slender, black, with a thin cinereous pile; antennæ robust; posterior margin of prothorax transverse, slightly emarginate centrally; wings faintly dusky, marginal cell narrow, lanceolate, very acute at tip, second submarginal scarcely half the length of the first and much narrowed on both sides towards the marginal, receiving the first recurrent near base and the second about the middle, the third discoidal cell transverse, pointed beneath, rounded above; legs long, especially posterior pair; abdomen as long as head and thorax, narrow, subcompressed. Length .16 inch.

One specimen. (Coll. G. W. Belfrage.)

Aporus rufiventris, n. sp.

♀.—Black, opaque, sericeous; metathorax covered with a very dense dull cinereous pile, posterior face excavated and transversely wrinkled; wings dusky, apical third fuliginous, neuration as in *minimus*; legs strongly sericeous; abdomen entirely bright fulvo-ferruginous, sericeous. Length .30 inch.

One specimen. (Coll. G. W. Belfrage.)

Ceropales bipunctata.

Ceropales bipunctata, Say, Long's 2d Exped. ii. p. 334.

Five ♂ ♀ specimens. (Belfrage; Boll.)

Ceropales nigripes.

Ceropales nigripes, Cress. Trans. Am. Ent. Soc. i., p. 139.

One ♀ specimen. (Belfrage.)

Ceropales texana, n. sp.

♂.—Black, abdomen and leg sericeous; face, two spots on clypeus, scape beneath, posterior margin of prothorax above, spot behind scutellum, posterior angles of metathorax, spot on each side of second abdominal segment and two or three spots on apical segments, pale lemon-yellow; face silvery sericeous; wings violaceous-black. Length .53 inch.

One specimen. (Coll. G. W. Belfrage.)

Ceropales elegans, n. sp.

♀.—Large, pale ferruginous, with a strong silvery sericeous pile; face, clypeus, broad anterior orbits, narrow posterior orbits, margins of prothorax, broad behind, a spot on each side anteriorly, spot on scutellum and postscutellum, apical angles of metathorax, anterior coxæ beneath, line on posterior pair, extreme tips of femora, and broad apical margins of abdominal segments, those on two basal segments sinuate and uneven anteriorly, all citron-yellow; tips of antennæ blackish; mesothorax sparsely punctured, longitudinally depressed on each side of disk, with an impressed longitudinal line over tegulæ; metathorax obliquely flattened behind, with a deeply impressed central line, brilliantly silvery-sericeous; posterior legs very long, their coxæ subcompressed, broadly dilated at base; wings yellow-hyaline, extreme tips dusky. Length .55 inch.

One specimen. (Coll. G. W. Belfrage.)

Ceropales fulvipes, n. sp.

♀.—Small, black, shining, covered with a more or less obvious silvery-sericeous pile; clypeus, broad anterior orbits, dilated above, narrow posterior orbits, scape beneath, posterior margin of prothorax, a spot on each side anteriorly, tegulæ, spot on scutellum and on postscutellum, apical angles of metathorax, four anterior coxæ beneath, posterior pair at tips and on outer side, four anterior knees before, anterior margins of abdominal segments 1—5, broad on first and second the anterior margins of which are uneven, narrow on remaining segments, sinuate laterally, all pale lemon-yellow; labrum testaceous and mandibles reddish toward tips; wings yellowish-hyaline, paler at tips; legs fulvous, posterior pair not unusually long, all the coxæ black at base, posterior pair broad at base, fulvous beneath; abdomen short, robust, apical segment pearly-white; venter and antennæ beneath brownish. Length .35 inch.

Two specimens on Solidago flowers in October. (Belfrage.) Allied to *longipes*, Smith.

Mygnumia ustulata.

Hemipepsis ustulata, Dahlb. Hym. Eur. i., p. 123.

Five ♂ ♀ specimens. (Belfrage; Boll.)

Pepsis formosa.

Pompilus formosus, Say, Amer. Ent. pl. 42.

Twelve ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.) This is probably identical with *cærulea*, Linn. In size it varies from .65—1.50 inch, and is distinguished at once from *marginata* by the clear apical margin of the wings.

Pepsis marginata.

Pepsis marginata, Beauv. Ins. p. 94, pl. 2, figs. 2, 3.

Ten ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.) One ♀ specimen, which may be named var. *sericata*, is covered with a dense silvery-sericeous pile, as in a specimen of *Pompilus philadelphicus*, mentioned above.

Pepsis dubitata.

Pepsis dubitata, Cress. Trans. Am. Ent. Soc. i., p. 144.

Six ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

SPHEGIDÆ.

Ammophila grossa, n. sp.

♀.—Large and very robust, black, subopaque, sparsely clothed with a long black pubescence: head broader than thorax, face broad, densely punctured, clypeus large, rugose laterally, apex with a large deep fovea, apical margin dentate, lateral margin broad, slightly reflexed; mandibles fulvo-testaceous above, black at base and apex; thorax densely punctured; metathorax opaque, transversely striated, sides obliquely striated, apex abrupt, with a deep fovea above; tegulæ dull testaceous on posterior margin; wings fusco-hyaline; legs shining; abdomen robust, shining, yellow-ferruginous, petiole short, black, not extending beyond posterior trochanters, second segment black at base and narrowly on disk half way to apex, a transverse stain on apex of fourth segment and the following segments, except base of fifth, black. Length .95 inch.

One specimen. (Coll. L. Heiligbrodt.) A very robust species, having much the general appearance of a *Sphex*, resembling somewhat *L. rufiventris*, described below.

Ammophila Gryphus.

Ammophila Gryphus, Smith, Brit. Mus. Cat. iv., p. 222.

Eight ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Ammophila iuepta, n. sp.

♀.—Black, with sparse pale pubescence; clypeus with large sparse punctures; prothorax with a small notch on disk above; mesothorax sparsely punctured, more thickly so laterally, disk with deeply impressed longitudinal groove, and a shallow depression on each side; scutellum with coarse longitudinal stria; postscutellum rugose; metathorax with pale pubescence, coarsely punctured laterally and apically, the dorsal space flattened, rugose at base, shining and transversely, somewhat obliquely, striated toward apex, extreme

apex sometimes with a silvery spot on each side; pleura sparsely punctured, an oblique stripe on posterior margin and the tubercles silvery; tegulae shining black; wings hyaline, dusky at tips; legs entirely black, so newhat sericeous; abdomen subsericeous, extreme apex of second joint of petiole and the following segment except narrow apical margin, pale red. Length .75—.85 inch.

♂.—Face much narrower and with the clypeus densely silvery; pubescence of head and thorax more dense; sides of second joint of abdominal petiole sometimes reddish, the following segment with a central black line above. Length .70—.75 inch.

Five ♂ ♀ specimens. (Belfrage; Boll.)

Ammophila vulgaris.

Ammophila vulgaris, Cress. Proc. Ent. Soc. Phil. iv., p. 458.

Five specimens. (Belfrage.)

Ammophila pictipennis.

Ammophila pictipennis, Walsh, Am. Ent. i., p. 164.

Four ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Ammophila intercepta.

Ammophila intercepta, St. Farg. Hym. iii., p. 378.

Six ♂ ♀ specimens. (Belfrage; Boll.)

Ammophila gracilis.

Ammophila gracilis, St. Farg. Hym. iii., p. 381.

Nine ♂ ♀ specimens. (Belfrage; Boll.)

Pelopæus cémentarius.

Sphæx cémentaria, Drury, Ins. i., p. 105.

Six specimens. (Belfrage; Boll; Heiligbrodt.) One specimen has the petiole of abdomen entirely yellow, and another has the abdomen entirely black.

Pelopæus cæruleus.

Sphæx cæruleus, Linn. Syst. Nat. i., p. 941.

Eleven ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

***Pelopæus texanus*, n. sp.**

♀.—Color paler blue than that of *cæruleus*, and clothed with a thin whitish sericeous pubescence, except on head where it is black; face silvery; thorax sparsely punctured; prothorax deeply notched above; mesothorax deeply channeled medially; scutellum smooth, shining, sparsely punctured; metathorax shining, finely and closely punctured on the sides, more sparsely so above, where the surface is nearly smooth, not grooved, but with a shallow fovea near apex, pleura closely punctured; tegulae pale on outer margin; wings fuscous, paler at base; legs with short pale pubescence; abdomen as in *cæruleus*, pale sericeous. Length .70 inch.

♂.—Darker blue than ♀, the pubescence more dense; face densely silvery; wings hyaline, apical margin fuscous. Length .65 inch.

Two specimens from Dallas and Comal Counties. Easily distinguished from *cæruleus* by the pale pubescence of body.

Podium rufipes.

Podium rufipes, Fabr. Syst. Piez. p. 183.

Two specimens. (Belfrage.)

Chlorion caeruleum.

Sphex caerulea, Drury, Ins. ii., p. 75, pl. 39, fig. 8.

Two ♀ specimens. (Boll; Heiligbrodt.)

Sphex pennsylvanica.

Sphex pennsylvanica, Linn. Syst. Nat. i., p. 941.

Five ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Sphex habena.

Sphex habena, Say, Insects of Louisiana, p. 14.

Eight ♂ ♀ specimens. (Belfrage; Boll.) Found quite commonly on *Solidago* flowers in September and October.

Sphex apicalis.

Sphex apicalis, Smith, Brit. Mus. Cat. iv., p. 262.

Six ♂ ♀ specimens. (Belfrage; Boll.)

Sphex flavipes.

Sphex flavipes, Smith, Brit. Mus. Cat. iv., p. 263.

One ♀ specimen found on Sumach flowers in August. (Belfrage.)

Sphex tibialis.

Sphex tibialis, St. Farg. Hym. iii., p. 339.

Ten ♂ ♀ specimens. (Belfrage; Boll.)

Sphex abdominalis, n. sp.

♂.—Deep velvety, clothed with a thin black pubescence; mesothorax with a finely impressed central line; metathorax above finely transversely aciculated; legs entirely black; wings black, subviolaceous; abdomen short, ovate, shining, second and third segments yellow-ferruginous; petiole slender, as long as posterior coxæ and trochanters, black. Length .75 inch.

One specimen found on Sumach flowers in August. (Coll. G. W. Belfrage.) Closely resembles *Ammophila cementaria*, Smith, in general appearance, but more robust.

Sphex rufiventris, n. sp.

♀.—Deep velvety-black, with sparse black pubescence; head shining, mesothorax and scutellum closely and minutely punctured, the latter shining; metathorax transversely aciculated; wings fuscous, subviolaceous, second marginal cell narrower than usual, quadrangular; legs entirely black, tibiae brown sericeous within; abdomen oblong-ovate, shining, smooth, entirely yellow-ferruginous, slightly obsuscated towards apex, petiole as long as posterior coxæ, black. Length .90 inch.

Two specimens found on Sumach flowers in August. (Belfrage; Heiligbrodt.) In general form and color this species closely resembles some ♀ varieties of *Priononyx Thomæ*, Fabr.

Sphex texana, n. sp.

♂ ♀.—Black, clothed with silvery pubescence; face and clypeus with dense pale golden pubescence, the clypeus of ♀ more or less denuded on apical middle; upper posterior margin of prothorax, the sides of mesothorax and post-scutellum of ♂, tubercles, a spot behind, an oblique line on each extreme side of metathorax and a duplex spot at apex, all of dense silvery or pale golden pile; metathorax of ♂ with rather dense fine whitish sericeous pubescence, more obvious when viewed from behind; wings hyaline, apical margins dusky, darker in ♂; legs black, sericeous; abdomen elongate ovate, pale sericeous, especially in ♂, the first and second segments except apical margin of the latter, and sometimes a narrow interrupted band at base of third segment, orange-ferruginous; remainder black; petiole short, black. Length .85—.95 inch.

Five ♂ ♀ specimens. (Belfrage; Boll.) A very common species, found on *Solidago* flowers in September and October.

Sphex Belfragei, n. sp.

♂ ♀.—Black, with sparse black pubescence, more dense on head; clypeus subconvex, densely, rather coarsely punctured, with a small fovea near apical middle; prothorax subemarginate above; mesothorax shining, with a slight opaline iridescence, sparsely and finely punctured; scutellum shining, deeply impressed centrally; metathorax with a short dense, erect black pubescence, upper surface densely transversely striated; wings yellow-hyaline, subviolaceous, apical margins broadly fuliginous; legs black, tibiæ brown sericeous within; abdomen shaped much as in *texana*, yellow-ferruginous, shining, apex more or less obfuscated, sometimes blackish, petiole black. Length .75—.90 inch.

Four ♂ ♀ specimens found on Sumach flowers in August. (Belfrage.) This has the same form as *texana*, from which it is at once distinguished by the yellow wings and by the absence of all silvery markings.

Sphex lauta, n. sp.

♀.—Velvety-black, covered with a very fine pale golden sericeous pile, more obvious in certain lights; head with rather long golden pubescence; face, clypeus, spot on cheeks, upper posterior margin of prothorax, broad lateral margin of mesothorax, connected posteriorly by a narrow line, postscutellum, upper surface of metathorax entirely, an oblique line on each extreme side, the tubercles and a spot immediately behind, bright golden; tegulæ black; wings yellowish-hyaline, apical margin broadly fuliginous; legs black, with a pale sericeous pile, anterior femora beneath with a stripe of golden pubescence, tibiæ brown-sericeous within; abdomen elongate-ovate, fusco-ferruginous, pale sericeous in certain lights, petiole very short, stout, black, with pale golden pubescence. Length 1.—1.15 inch.

♀ var.—Abdomen entirely black.

Five specimens found on Sumach flowers in August. (Belfrage; Boll; Heiligbrodt.) This magnificent species closely resembles *Laniierii*, Guér., which, however, has red legs and paler abdomen.

Should the variety with black abdomen prove to be a distinct species, it may be named *illustris*.

Sphex ichneumonea.

Sphex ichneumonea, Linn. Syst. Nat. ii., p. 959.

Seven ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Sphex dubitata, n. sp.

♀.—Differs from *ichneumonea*, as follows;—Form more slender; the face, clypeus, sides of mesothorax, spot beneath tegulæ and metathorax clothed with dense silvery pile, instead of bright golden; the mandibles and scape entirely black; the wings pale yellowish-hyaline, with dusky apical margin, instead of uniformly fuscous; the coxæ with silvery pile; otherwise as in *ichneumonea*. Length .85 inch.

Three specimens. (Belfrage.)

Priononyx atrata.

Sphex atrata, St. Farg. Hym. iii., p. 355.

Three ♂ ♀ specimens. (Belfrage; Boll.)

Priononyx Thomæ.

Sphex Thomæ, Fabr. Ent. Syst. ii., p. 199.

One ♀, four ♂ specimens found abundantly on Sumach flowers in August. (Belfrage.) The abdomen of the ♀ specimen is entirely yellow-ferruginous, except petiole; while that of the ♂ specimens is more or less varied or banded with black; the ♂ specimens have also quite a dense clothing of silvery pubescence.

Priononyx brunripes, n. sp.

♂.—Black, clothed with black pubescence, face and clypeus faintly silvery in certain lights; mandibles toward tips and scape beneath at tips dull reddish; thorax entirely black, without any silvery markings; metathorax opaque, upper surface sparsely and indistinctly punctured, with a very shallow longitudinal central depression, widened posteriorly, sides somewhat obliquely striated; tegulæ pale luteous on outer margin, base brown; wings fuscous; legs dark brown, coxæ and femora before black; abdomen shaped as in *Thomæ* ♂, dark brown, varied with black at apex, petiole black. Length .65 inch.

One specimen found on Sumach flowers in August. (Coll. G. W. Belfrage.) Very distinct from *Thomæ* by the total absence of silvery pubescence.

LARRIDÆ.

Larrada triloba.

Lyrops (Lyroda) triloba, Say, Bost. Journ. Nat. Hist. i., p. 372.

Two specimens. (Belfrage.)

Larrada subita.

Lyrops (Lyroda) subita, Say, Bost. Journ. Nat. Hist. i., p. 372.

One specimen. (Belfrage.)

Larrada americana, n. sp.

♂.—Black, opaque; head broad; face, occiput and cheeks with a dense bright silvery pile; the front, behind antennæ, shining, with a central rounded fovea and on each side a deep longitudinal furrow; clypeus closely and finely punctured, except apical margin which is smooth, polished and broadly rounded; vertex closely punctured, with a broad shallow depression around anterior ocellus and with a deep pit on each side, posterior ocelli indistinct, indicated by two small protuberances on a shining space, back of which is a large deep fovea; antennæ long, scape long, keeled beneath; thorax and scutellum densely and finely punctured; prothorax, sides of mesothorax, and pleura with silvery pile, more obvious in certain lights; metathorax long, abrupt laterally and at apex, opaque-black, densely and finely granulated, with dense silvery pile, more obvious at sides and apex; tegulæ shining, piceous-black; wings ample, uniform dark fuliginous, with a brilliant æneous or eupreous reflection, marginal cell abruptly truncate at tip; legs entirely black, with fine silvery pile; abdomen sericeous, all the segments, except the last, with an apical band of silvery pile, apex with brownish pile. Length .55 inch.

One specimen. (Belfrage.) This is also found in Pennsylvania, and is allied to *fuliginosa*, Dahlb.

Larrada vinulenta.

Larrada vinulenta, Cress. Proc. Ent. Soc. Phil. iv., p. 133.

One specimen. (Belfrage.)

Larrada argentata.

Larra argentata, Beauv. Ins. p. 119, pl. 3, fig. 9.

Eight specimens. (Belfrage; Boll.)

Larrada analis.

Larra analis, Fabr. Syst. Piez. p. 220.

One ♀ specimen. (Belfrage.)

Larrada terminata.

Larrada terminata, Smith, Brit. Mus. Cat. iv., p. 291.

Four specimens. (Belfrage.)

Larrada texana, n. sp.

♀.—Black, shining, finely punctured; face with silvery-white pubescence; clypeus with scattered punctures, transversely depressed near apex, which is truncate and broadly margined; mandibles red medially; behind anterior ocellus two small swellings, on the posterior part of which are placed two oblique polished spots and behind these a deep fovea; cheeks and occiput with silvery-pubesence; scape of antennæ short, with a reddish spot beneath; mesothorax and scutellum shining, finely and sparsely punctured; posterior margin of prothorax, sides of mesothorax and pleura with dull silvery pile; metathorax short, abrupt laterally and behind, opaque, with dense obscure silvery pile, upper surface very finely reticulated, with indistinct longitudinal striæ at extreme base, lateral declivity obliquely aeculated; tegulæ pale rufotestaceous, blackish at base; wings hyaline, sometimes tinged with yellowish, marginal cell truncate at tip; legs black, with silvery pile, two apical joints

of tarsi honey-yellow; abdomen entirely pale ferruginous, with an indistinct silvery sericeous pile in fresh specimens. Length .40 inch.

♂.—Colored like the ♀, but is densely clothed with a bright silvery-pubescence; mandibles ferruginous; thorax less shining; mesothorax brilliantly silvery, the upper surface scarcely reticulated, except at base; abdomen with silvery bands. Length .30 inch.

Three specimens. (Belfrage.) Very near *tarsata*, Say, from which it differs by the minutely reticulated metathorax.

Larrada Belfragei, n. sp.

♀.—Black; face and clypeus bright silvery; clypeus depressed and shining at apex; mandibles dull reddish; back of head and cheeks with silvery-sericeous pile; scape reddish at tip beneath; posterior margin of prothorax, sides of metathorax and pleura with a silvery pile; metathorax above finely and densely rugulose with a few short radiating striæ at base, sides obliquely and minutely aciculate, posterior face transversely aciculate and with a deep central elongate fovea; tegulæ honey-yellow; wings hyaline, faintly tinged with dusky towards apex; legs fulvous, coxæ and base of femora black, tibiæ silvery sericeous; abdomen fulvo-ferruginous, with a very fine silvery sericeous pile, more dense at the sides and apex of segments, the three apical segments black. Length .40 inch.

One specimen. (Coll. G. W. Belfrage.) A very pretty species, resembling *Tachytes abdominalis* in the color of the body.

Tachytes distinctus.

Tachytes distinctus, Smith, Brit. Mus. Cat. iv., p. 307.

Three ♀ specimens. (Belfrage; Boll; Heiligbrodt.) The legs, except coxæ, are fulvous and the abdomen has only three silvery-sericeous bands.

The several species of *Tachytes* were found by Mr. Belfrage, in September, on flowers of Wild Sage (*Croton capitatum*).

Tachytes elongatus, n. sp.

♂.—Black; head and thorax clothed with a short pale sericeous pubescence, silvery when viewed in certain lights; face and clypeus clothed with a dense pale golden pubescence; mandibles piceous at tips, yellowish at base and reddish before tips; the flattened prominence above anterior ocellus clothed with dense pale pubescence, between the summit of eyes a central channel; scape of antennæ short, with long pale hairs; posterior margin of prothorax silvery; mesothorax and scutellum closely and feebly punctured, clothed with a short erect sericeous pubescence, more dense and somewhat silvery on lateral and posterior margins of mesothorax and on postscutellum; metathorax without distinct punctures, clothed with a whitish pubescence, somewhat silvery in certain lights, a deep shining fovea at apex above and medial channel on posterior face widened above; pleura clothed with a pale silky pile; tegulæ pale testaceous; wings yellow hyaline, paler towards apex, apical margin, darker beneath tip of marginal cell, dusky; legs fulvous, with silvery sericeous pile, coxæ, trochanters and femora except tips, black; abdomen deep

velvety-black, basal segment with a long thin white pubescence, apex of segments 1—4 with a band of dense silvery-sericeous pile, segments 5 and 6 entirely black; apical segment bright silvery. Length .55—.65 inch.

Ten specimens. (Belfrage; Boll.) This may be the ♂ of *distinctus*, Smith.

Tachytes validus, n. sp.

♀.—Robust, black; face and clypeus with dense pale golden pubescence; vertex as in *elongatus*; back of head with short pale golden pile, long and silvery on cheeks beneath; middle of mandibles reddish; antennæ as in preceding species; thorax clothed with a dense dull golden pubescence, more dense on sides of mesothorax and longer and paler on metathorax; prothorax with bright silvery pile in certain lights; posterior face of metathorax with a deep central channel, not reaching apex; scutellum with shallow depression on disk; tegulæ dull fulvous; wings pale yellowish-hyaline, paler at apex; legs with golden pubescence, black, tibiæ and tarsi fulvous, sometimes the femora are more or less tinged with fulvous; abdomen black, basal segment with a pale silky pubescence; apex of segments 1—4 with a silvery sericeous band, apical segment bright golden. Length .70 inch.

♂.—Very much like *elongatus*, differing by the metathorax being densely clothed with a pale golden pubescence and by the wings not being margined at apex with dusky; the form is also much more robust in every way, the abdomen being wider and somewhat flattened above, while that of *elongatus* is narrow and convex. Length .65 inch.

Three specimens. (Belfrage.) More robust than *distinctus*, Smith, from which it may be distinguished by the pubescence of the thorax being much more dense, by the wings not being margined at apex with dusky, and by the abdomen having four silvery sericeous bands instead of three.

Three ♂ specimens (which I had labelled *breviventris*) differs only by the abdomen being short and subconvex and the femora fulvous at tips. Length .55 inch.

Tachytes sericatus, n. sp.

♀.—Black; face, clypeus, back of head, posterior margin of prothorax, mesothorax, especially at sides and behind, postscutellum, metathorax and pleura, clothed with a very short, fine silvery sericeous pile, very brilliant in certain lights; clypeus broadly and deeply margined at apex; vertex sculptured as in *elongatus*; metathorax with a small fovea on apex above and a deep channel on middle of posterior face, not reaching apex; tegulæ dull luteous; wings hyaline, tinged with yellowish toward base; legs black, with a silvery pile, especially dense on tibiæ; abdomen strongly silvery sericeous and when viewed obliquely from behind segments 1—4 have each a bright silvery band at apex; apical segment dull silvery. Length .60 inch.

♂.—More slender than ♀, the body less brilliantly sericeous, the wings clear hyaline and the apical segment of abdomen bright silvery. Length .50 inch.

Two ♂ ♀ specimens. (Belfrage.)

Tachytes obscurus, n. sp.

♀.—Black; face and clypeus clothed with a dense silvery pubescence; prominence above lower ocellus divided centrally by an impressed line, and behind it a lunate excavation or depression; back of head and cheeks with a silvery sericeous pile; posterior margin of prothorax silvery; lateral and posterior margins of mesothorax, pleura and metathorax with a silvery sericeous pubescence, longer on metathorax, which has a small fovea at apex above and a central groove on posterior face; tegulæ dull testaceous; wings hyaline, faintly dusky at apex; legs black, tibiæ and tarsi silvery sericeous; abdomen black, smooth and shining, more or less sericeous, base of first segment with a rather long, thin white pubescence, lateral apical margins of segments 1—3 more or less silvery sericeous, apical segment with dense golden pubescence. Length .55 inch.

Three specimens. (Belfrage.) Easily distinguished from the other species by the apical segment of abdomen only being golden, the clothing of the remainder of body having a silvery lustre.

Tachytes texanus, n. sp.

♂.—Black, clothed with an erect white pubescence, face and clypeus densely silvery; vertex as in *obscurus*; mesothorax and scutellum finely and distinctly punctured, lateral and posterior margins and posterior margin of prothorax more or less silvery in certain lights; metathorax with long white pubescence, a smooth shining shallow fovea on apex above and a short deep fissure on upper half of posterior face; tegulæ dull luteous, obscure at base; wings hyaline; legs black, with a silvery sericeous pile, especially dense on tibiæ, apical joints of tarsi more or less fulvous; abdomen convex, with a thin glittering pile, segments 1—4 each with a silvery sericeous band on apical margin more or less interrupted medially; apical segment bright silvery. Length .40—.45 inch.

Five specimens. (Belfrage; Boll.) This is our smallest species.

Tachytes abdominalis.

Larra abdominalis, Say, West. Quar. Rep. ii., p. 77.

Six ♀ specimens. (Belfrage; Boll.)

Tachytes rufo-fasciata, n. sp.

♂.—Black; face, clypeus, posterior margin of prothorax, lateral and posterior margins of mesothorax, postscutellum, sides of metathorax and pleura more or less, silvery; mandibles yellow-ferruginous, rufo-piceous at tips; vertex as in *obscurus*; metathorax sculptured as in *texanus*; tegulæ luteous; wings subhyaline, stained along the nervures with yellowish, nervures honey-yellow; legs fulvous, coxæ black, tibiæ silvery sericeous; abdomen black, basal segment with a silvery sericeous pile; narrow apical margin of first segment and second segment except basal margin reddish-fulvous, apical margin of remaining segments pale testaceous, apical segment silvery. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.) May be the ♂ of *abdominalis*, Say, although the legs are fulvous.

***Astata unicolor*.**

Astata unicolor, Say, Long's 2d Exped. ii., p. 337.

Two ♂ ♀ specimens. (Belfrage.)

***Astata rufiventris*, n. sp.**

♀.—Black, shining; head closely punctured, with a silvery white pubescence, most dense on face and cheeks; middle of clypeus with some black pubescence; mesothorax shining, with close distinct punctures, sparse on the disk; scutellum smooth, polished, impunctured on the disk; metathorax coarsely reticulated above, sides with long white pubescence, posterior face rugose, with a deep central fovea; pleura densely punctured, with long white pubescence; tegulæ black, polished; wings hyaline, apical margin broadly fuliginous; legs black, with pale glittering hairs; abdomen smooth, shining, entirely rufo-sanguineous. Length .50 inch.

One specimen. (Coll. G. W. Belfrage.)

***Astata bicolor*.**

Astata bicolor, Say, West. Quar. Rep. ii., p. 78.

One ♀ specimen. (Belfrage.)

***Astata terminata*, n. sp.**

♂.—Black; face and cheeks with long silvery-white pubescence; antennæ long, slender; mesothorax shining, closely punctured, slightly depressed on each side of disk and with a longitudinally impressed line on each side over tegulæ; sides of mesothorax anteriorly, pleura and metathorax with rather dense white pubescence, silvery in certain lights; scutellum smooth and polished; metathorax rather finely reticulated above, with a broad shallow depression on apical middle, posterior face with a large deep shining fovea near upper edge; tegulæ shining black; wings hyaline; legs with thin white pubescence; abdomen bright fulvo-ferruginous, a spot at base of first segment, which is deeply and broadly excavated, most of fourth segment and the following segments entirely, black. Length .42 inch.

One specimen. (Coll. G. W. Belfrage.)

BEMBICIDÆ.

***Bembex nubilipennis*, n. sp.**

♀.—Black, clothed with a fine white pubescence, having a beautiful silky lustre in certain lights; sides of face confluent with a spot between antennæ. spot before ocelli, posterior orbits, clypeus, labrum, mandibles except tips and scape beneath, bright lemon-yellow; prothorax yellow, with a large irregular black spot on middle, sometimes black with only the sides irregularly yellow; mesothorax black, with a yellow line over tegulæ and sometimes two short, slender discal yellow lines; scutellum black with a broad posterior yellow band, sometimes much narrowed centrally; postscutellum with a slender transverse yellow line; metathorax generally yellow with a large angular black line and an arcuate black line at basal margin, sometimes black, with lateral angles and two spots or an arcuate band on disk, yellow; pleura black with two or three irregular yellow spots beneath wings; tegulæ yellow, pupilled with fuscous; wings hyaline, the basal two-thirds more or less clouded

with yellowish-fuscous; legs yellow, coxæ and base of femora black; first segment of abdomen black with a large subovate yellow spot on each side, sometimes meeting on the disk and forming a broad band, sometimes the segment is yellow, with only basal and apical margins black; segments 2—5 each with a broad yellow band almost covering the segment, that of second segment generally enclosing two transverse black spots near base, those on the following segments more or less deeply indented with black on each side of basal middle, the basal and apical middle more or less emarginate with black; apical segment black, densely punctured; apical segments more or less clothed with black pubescence, shining black, segments 2—4 each with a yellow lateral spot. Length .75 inch.

♂.—Thorax generally black, immaculate except a line on pleura anteriorly covering the tubercles, sometimes the sides of prothorax and a line over tegulae are yellow; one specimen has a spot on each side of scutellum and a slender line on postscutellum yellow and the metathorax marked as in ♀, and another specimen has only a yellow spot on each lateral angle of metathorax; wings generally entirely hyaline, sometimes there is a faint fuscous cloud towards base; the yellow bands on abdomen are narrower than in ♀, with the emarginations larger and deeper, giving the bands a biundulate appearance; second ventral segment with a large hooked process on basal middle, very robust and broad at base and slender and acute at tip, this process is sometimes much reduced and in one specimen it is indicated merely by a slightly raised line; apical segment with a process shaped much like that on second segment, but smaller, and with a prominent carina on each side. Length .65—.80 inch.

Fifteen ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.) A very handsome and rather variable species, the ♀ being easily recognized by the conspicuously clouded wings, which in the ♂ are generally hyaline.

***Bembex texana*, n. sp.**

♀.—Black, head, thorax and base of abdomen clothed with a fine white pubescence; anterior orbits not reaching summit of eyes, posterior orbits, spot between antennæ, clypeus except two connected black spots at base, labrum and mandibles except tips, white; scape white beneath; thorax rather closely and delicately punctured; narrow posterior and lateral margins of prothorax, covering tubercles, a large spot on each side, a short transverse line beneath wings, and a small spot on each lateral angle of metathorax, white; anterior half of tegulae white; wings hyaline; legs white, with a slight yellowish tinge, coxæ, femora except more or less of tips, a stripe on all the tibiae within and on outer side of anterior pair, black; abdomen black, shining, a large transverse white spot on each side of first segment, a broad white band on middle of second segment deeply notched on anterior and posterior middle and enclosing two transverse black spots on each side of disk, and a biundulate white band on third, fourth and fifth segments, dilated laterally and deeply indented with black on each side of anterior middle; apical segment entirely black, densely punctured; venter shining black, the segments, except the last, with a small white spot on each apical corner. Length .75 inch.

Two specimens. (Boll.) Resembles *Sayi* in the markings of the

abdomen, but easily separated by the two black spots at base of clypeus.

Bembex Sayi.

Bembex Sayi, Cress. Proc. Ent. Soc. Phil. iv., p. 467.

One ♀ specimen. (Belfrage.)

Bembex Belfragei, n. sp.

♂.—Deep black, shining, head and thorax clothed with a fine, rather dense pale silky down; clypeus and labrum sometimes entirely black, sometimes the former is entirely yellow or a yellowish-white spot on each side, and the labrum sometimes yellow with the apex and central line, not reaching base, black; generally the anterior and posterior orbits are narrowly yellowish; mandibles more or less white on outer side, tips piceous; antennæ generally entirely black, only one specimen has the scape white beneath; thorax entirely black, except sometimes a line on lateral posterior margin of prothorax curving around tubercles; metathorax very short and flat behind; tegulæ black; wings hyaline, narrow; legs dull yellowish-white, coxæ and femora except tips and a line on upper anterior edge, black; abdomen robust, first segment with a large dull yellowish-white transverse spot on each side, more or less narrowed within; second and third segments each with a transverse band of same color, broad laterally and suddenly narrowed on the lateral anterior middle, and slightly interrupted on the disk; two or three following segments each with a narrow undulate band also slightly interrupted medially; ventral segments with spot on each side, the second with a large flattened, more or less hooked process, the terminal segment raised transversely with posterior edge carinate and sometimes dentate, Length .75 inch.

Five specimens. (Belfrage.) A very distinct species.

Bembex monodonta.

Bembex monodonta, Say, Long's 2d Exped. ii., p. 335.

One ♀ specimen. (Belfrage.)

Monedula carolina.

Monedula carolina, Fabr. Ent. Syst. ii., p. 249.

Three ♂ specimens. (Boll; Heiligbrodt.)

Monedula 4-fasciata.

Monedula 4-fasciata, Say, Long's 2d Exped. ii., p. 336.

Seven ♂ ♀ specimens. (Belfrage, Boll; Heiligbrodt.)

Monedula ventralis.

Monedula ventralis, Say, Long's 2d Exped. ii., p. 337.

Fourteen ♂ ♀ specimens. (Belfrage.) The clypeus and mandibles vary from entirely black to entirely yellow; the mesothorax has sometimes two short yellow discal lines; the two spots on scutellum are sometimes confluent, forming a broad band; the prominent angles of metathorax more or less broadly yellow, and in some specimens there is an arcuate yellow line on upper middle, reaching from base of

wings to the verge of the broadly concave posterior face, sometimes this line is broken into spots; the legs vary considerably in color, the femora being sometimes black, sometimes fulvous, sometimes yellow, with black stripe above, the tibiæ and tarsi vary from yellow to fulvous; the bands of abdomen vary much in width, in some specimens being twice as broad as the others, all are slightly interrupted medially. Length .55—.70 inch.

Monedula formosa, n. sp.

♀.—Black, with a very short white silky down; face and clypeus silvery when viewed from above; face yellowish-white, an angular yellow line immediately before ocelli; posterior orbits gradually broader beneath, yellowish-white; clypeus and labrum white; mandibles yellow, black at tips; antennæ black, two basal joints entirely and the third joint at base and beneath lemon-yellow; prothorax bright yellow, a narrow black band on anterior middle; a large U-shaped mark on mesothorax, line over tegulæ, posterior margin of scutellum, postscutellum, the metathorax, except a large angular black line on posterior face and an arcuate narrow black band at base, tubercles, pleura except two black spots beneath between four anterior legs, and the tegulæ anteriorly bright lemon-yellow; metathorax flattened behind, slightly concave, lateral angles not prominent; wings short, narrow, hyaline; legs pale lemon-yellow, a black line on all the femora above; abdomen with a lemon-yellow band on all the segments except the last, that on first segment broad, undulate on posterior margin and deep and roundly notched on anterior middle; that on second segment also broad, sometimes enclosing two transverse black spots which, in one specimen, are confluent and connected with the black at base by the central emargination; those on the three following segments narrow and biemarginate on each side of anterior middle; apical segment with a large yellow spot; venter black, shining, with a yellow spot on each side of segments 2—5, those on second segment large and connected by narrow line on apical margin, those on third and fourth segments also sometimes connected in same way. Length .75 inch.

♂.—Clypeus and labrum pale lemon-yellow; the angular line beneath ocelli connected with the yellow on the face by a slender line; second and third joints of antennæ black above; prothorax with a very large black spot on anterior middle; mesothorax black with only a narrow yellow line over tegulæ; band on scutellum narrow, dilated laterally; angular black line on metathorax much broader, sometimes the metathorax is black, with the lateral angles and a very narrow arcuate line towards base, yellow; a black line behind tubercles; line on femora above and tips of tarsi blackish; bands of abdomen narrower than in ♀, that on first segment slightly interrupted on the disk, those on remaining segments undulate posteriorly and broadly, squarely and sometimes obliquely emarginate, or biemarginate on anterior middle; first ventral segment yellow, sides of second and third rather broadly yellow; otherwise as in ♀. Length .75 inch.

Six specimens. (Belfrage; Boll; Heiligbrodt.) In the markings of thorax the ♀ closely resembles those of *speciosa*, Cress.

Monedula pictifrons.

Monedula pictifrons, Smith Brit. Mus. Cat. iv., p. 335.

Two ♂ ♀ specimens. (Belfrage.) The ♂ has much less yellow than the ♀ and the color is paler; all the markings are much reduced and the band on abdomen broken on each side of middle.

Monedula neglecta. n. sp.

♀.—Black, the entire body thinly clothed with a short pale pubescence; face, anterior orbits, lower posterior orbits, clypeus, labrum, mandibles except tips, palpi, antennæ beneath, narrow posterior margin of prothorax, tubercles, spot beneath wings, line over tegulæ, spot on each side of scutellum, band on postscutellum, spot on the prominent lateral angles of metathorax, coxæ and femora beneath, most of tibiæ and tarsi, and apical fascia on all dorsal abdominal segments except the last, those on segments 2—5 broadly and squarely emarginate anteriorly, all lemon-yellow, the fasciæ on abdomen obscure in color; tegulæ dull testaceous; wings hyaline; all the femora above and behind, and spot on tibiæ behind near tips, black, tarsi tinged with fulvous; abdomen sparsely punctured. Length .48 inch.

One specimen from Comal Co.

NYSSONIDÆ.

Stizus speciosus.

Sphæx speciosus, Drury, Exot. Ins. ii., 71, pl. 38, fig. 1, ♀.

Four ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Stizus texanus. n. sp.

♂ ♀.—Black, clothed with a dense, pale sericeous pile; anterior orbits, large spot on middle of face, clypeus and labrum pale yellow, with a dense silvery pile; upper anterior orbits, posterior orbits, mandibles except tips and the three basal joints of antennæ, ferruginous, scape yellow beneath in ♂; prothorax ferruginous, upper posterior margin and most of tubercles pale yellow; rather broad lateral margin of mesothorax, tegulæ, scutellum and postscutellum of ♂, ferruginous or brown, scutellum and postscutellum of ♀ yellow, the former sometimes interrupted with ferruginous at base; metathorax sometimes tinged with ferruginous, generally entirely black; wings not reaching beyond tip of abdomen, strongly stained with fuscous, yellowish towards base; legs entirely ferruginous, sericeous; abdomen more or less ferruginous at base of first and sometimes the second segment, the four basal segments each with a large pale yellow lateral spot, rounded on the first and second segments and ovate on the two following, that on the fourth narrower and longer, sometimes almost meeting on the disk, sometimes the fifth segment of ♂ has a lateral spot or line; venter tinged laterally and at apex with ferruginous, the third and fourth segments each with a round pale yellow lateral spot, sometimes much reduced and subobsolete. Length 1.15—1.20.

Four ♂ ♀ specimens. (Boll.) A very distinct species.

Stizus fervidus, n. sp.

♀.—Fulvo-ferruginous, head and thorax clothed with a short golden-fulvous pubescence, more long and dense on metathorax; face, line on anterior orbits as far up as ocelli, clypeus and labrum, pale yellow, middle of clypeus tinged with fulvous, the sides clothed with a silvery white pile; mandibles long, black, fulvous at base; antennæ black, three basal joints ferruginous; narrow posterior margin of prothorax and tubercles yellow; anterior margin of mesothorax and a line over tegulæ fuscous; mesothorax, scutellum and pleura closely and finely punctured, shining, metathorax more densely punctured, the base with a central impressed line; wings hyaline, yellow at base and in base of marginal cell, rest of marginal cell fuliginous; legs ferruginous, tarsi paler; abdomen shining, sparsely punctured, fulvo-ferruginous, segments 1—5 each with a lemon-yellow band, that on first segment broad, slightly interrupted at the middle and indented on each side anteriorly, that on second segment broader, deeply and roundly emarginate on each lateral anterior corner and slightly indented on anterior middle, and with a short narrow transverse fulvous line on each side near apex, three following segments each with the band continuous and enclosing on each side near apex a fulvous spot; apical segment densely punctured, carinate on each side, the carinæ meeting at apex; second ventral segment with a large yellow spot on each side. Length .95 inch.

One specimen. (Heiligbrodt.) This fine species resembles *grandis*, Say, in color, but is at least one-half smaller and otherwise distinct.

Larra unieincta.

Stizus unieincta, Say, West. Quar. Rep. ii., p. 77; Am. Ent. pl. 2.

Two specimens. (Belfrage.)

Nysson aurinotatus.

Nysson aurinotatus, Say, Bost. Journ. Nat. Hist. i., p. 368.

Three ♀ specimens. (Belfrage; Boll.)

Nysson texanus, n. sp.

♀.—Black, opaque; head closely punctured, clothed with a fine appressed golden pile, very dense on each side of front and a line across it; clypeus with dense pale golden pile; labrum testaceous; mandibles more or less tinged with ferruginous; antennæ black, sericeous, apex of scape beneath pale ferruginous; thorax closely or rather coarsely punctured, clothed with a very fine pale golden pile, which is silvery on the pleura and metathorax laterally and bright silvery on pleura beneath and coxæ; posterior margin of prothorax, continued around the tubercles, a band at base of scutellum, lateral angles of metathorax and a spot beneath tegulæ, immediately in front of a small, but prominent tubercle, all bright golden; mesothorax with a well-impressed central longitudinal line not reaching beyond the disk; scutellum rugose, sides carinate and somewhat reflexed, as also the postscutellum which is bilobate; lateral spine of metathorax long and subacute, tipped with pale yellow; tegulæ ferruginous; wings smoky, darker in marginal cell and at extreme tip; legs ferruginous, with pale sericeous pile; abdomen pale golden sericeous, not densely punctured, a broad band of dense golden pile near base of first segment; a transverse ovate spot on each side at apex of first segment, a short

narrow line on each side at apex of second and third segments and narrow apical margin of all the segments except the last, pale yellow; sometimes the spots and lines are dull yellow, while the narrow well-defined margins are bright golden. Length .30—.45 inch.

♂.—Has the sides of the face and clypeus bright silvery; the coxæ, trochanters and femora except tips sometimes blackish; the fourth and sometimes the sixth abdominal segments above with a lateral apical pale yellow spot; tip of apical segment with four teeth, the lateral ones very short. Length .30—.45 inch.

Six specimens. (Belfrage; Boll.) Closely allied to *aurinotatus*, Say.

Nysson? inerme, n. sp.

♀.—Black, sides of face, clypeus and cheeks bright silvery, tip of clypeus polished; mandibles slender, acute, whitish, tips black; head slightly broader than thorax, transverse, a double prominence on middle of the front just above antennæ, which are inserted close to base of clypeus and are short and robust; ocelli arranged in a triangle; thorax shining, feebly punctured; a line on prothorax above, slightly interrupted medially, tubercles, tegulæ and band on postscutellum, white; metathorax opaque, finely granulated, rounded, unarmed, covered laterally with a silvery sericeous pile; wings hyaline, dusky on apical margin; marginal cell long, sublanceolate, blunt at tip, first submarginal cell long, large, broader than in *Nysson*, receiving the first recurrent nervure at its extreme apex, second submarginal small, subtriangular, petiolated, receiving the second recurrent nervure, which is very much bent outwardly, at about the middle, third submarginal obliquely subquadrate, as in *Harpactus*; legs short, slender, apical half of four anterior femora beneath, and a line on all the tibiæ behind, whitish; tarsi brownish; abdomen subsessile, convex, shining, apex acuminate, second and third segments contracted at base, first segment prominently convex above, the following segments covered with a silvery sericeous pile, especially on the sides, only visible when viewed in certain lights; ovipositor exerted; second ventral segment not protuberant. Length .23 inch.

One specimen. (Coll. G. W. Belfrage.) Seems intermediate between *Harpactus* and *Nysson*.

Gorytes Belfragei, n. sp.

♀.—Black, with a silvery sericeous pile; eyes very large, face very narrow, pale yellow, as well as the clypeus and narrow anterior orbits; labrum and mandibles toward base, pale ferruginous; antennæ black, scape lemon-yellow, base of flagellum tinged with ferruginous, the apical joint yellow; mesothorax with large punctures, sparse on the disk; upper posterior margin of prothorax, tubercles, lateral margin of mesothorax, two spots on scutellum, nearly confluent at base, postscutellum, dot on tegulæ and a spot beneath, lemon-yellow; basal space of metathorax minutely punctured; wings hyaline, second cubital cell receiving one recurrent nervure at the middle and the other near apex; third cubital as long as the first, narrowed almost one-half towards base above; legs ferruginous, the anterior pair and the outer edge of four posterior tibiæ, pale yellow; posterior tarsi twice the length of their

tibiæ; abdomen elongate, not much narrowed at base which is dull ferruginous, minutely and sparsely punctured, segments 1—5 each with an apical lemon-yellow band, broadly dilated laterally on second and third segments and indented on each side of middle of segments 2—4; second and third ventral segments with a triangular yellow spot on each lateral apical corner. Length .50 inch.

One specimen. (Coll. G. W. Belfrage.) Larger than *moneduloides*, Pack., which it resembles.

Gorytes costalis, n. sp.

♀.—Black, subsericeous; face broad; broad anterior orbits, narrow line on posterior orbits, anterior margin of the broad transverse clypeus, spot on mandibles, scape beneath, upper posterior margin of prothorax, tubercles, transverse spot beneath tegulæ, spot on lateral margin of mesothorax over tegulæ, broad band on apex of scutellum, tip of anterior femora, the two posterior pair beneath, all the tibiæ in front, apical margins of abdominal segments 1—5, all lemon-yellow; antennæ with joints 2—6 pale ferruginous beneath; mesothorax, pleura and scutellum with large scattered punctures; metathorax with large, rather dense punctures, the basal triangular space with radiating carinæ; tegulæ fuscous; wings hyaline, the costa broadly fuliginous almost to apex, second cubital cell receiving the two recurrent nervures, which are approximated, between middle and apex, third cubital obliquely quadrate, very little narrowed above; tibiæ behind and the tarsi ferruginous, posterior tarsi not much longer than their tibiæ; abdomen ovate, convex, much narrowed at base, covered with deep punctures, more coarse and dense on apical segments; second ventral segment convex, coarsely punctured, and with an apical lateral yellow spot. Length .45 inch.

One specimen. (Boll. Coll. Mus. Comp. Zoology.)

Gorytes Bollii, n. sp.

♀.—Black, shining, densely and finely punctured, clothed with a fine pale sericeous pile, rather long on face, cheeks, pleura and metathorax; face broad; two spots on clypeus, scape beneath, upper posterior margin of prothorax, tubercles, spot beneath tegulæ, short line on each side of mesothorax over tegulæ, postscutellum, and narrow apical margins of abdominal segments 1—3, dilated laterally, lemon-yellow; joints 2—4 of antennæ beneath, tegulæ and legs, except coxæ, ferruginous; postscutellum protuberant; mesothorax strongly punctured; metathorax minutely punctured, pubescent, the basal space with a crenulated central longitudinal groove, and coarsely striated on posterior margin; wings dusky hyaline, radial cell fuliginous, second cubital cell broad, receiving the recurrent nervures, which are distant, one before the middle and the other near apex, third cubital narrower than usual, obliquely quadrangular; abdomen ovate, convex, much narrowed at base, very minutely punctured; second ventral segment convex, with large deep scattered punctures and a small yellow lateral apical spot. Length .35 inch.

One specimen. (Boll. Coll. Mus. Comp. Zoology.)

Alyson texanus, n. sp.

♂.—Black, shining, clothed with a pale subsericeous pubescence; face silvery; tips of mandibles ferruginous; scape whitish beneath, flagellum ferruginous beneath, apical joint curved and hooked; metathorax elongate, truncate behind, with lateral angles prominent, basal enclosed space elongate and rugose, on each side of space the surface is transversely striated to lateral declivity; tegulæ brown; wings hyaline, apex dusky, a faint cloud beneath tip of stigma; four anterior tibiæ and the posterior pair slightly at base, ferruginous; abdomen smooth, shining, the first segment, except base, and the second entirely rufo-ferruginous; apex with two long slender setæ. Length .25 inch.

One specimen. (Coll. G. W. Belfrage.)

CRABRONIDÆ.

Trypoxylon politum.

Trypoxylon politus, Say, Bost. Journ. Nat. Hist. i., p. 373.

Four ♂ ♀ specimens. (Boll; Heiligbrodt.)

Trypoxylon clavatum.

Trypoxylon clavatus, Say, Bost. Journ. Nat. Hist. i., p. 374.

Two specimens. (Boll.)

Trypoxylon frigidum.

Trypoxylon frigidum, Smith, Brit. Mus. Cat. iv., p. 380.

One ♂ specimen. (Belfrage.)

Trypoxylon texense.

Trypoxylon texense, Sauss, Hymen. Novara-Exped. p. 77.

Ten ♂ ♀ specimens. (Belfrage; Heiligbrodt.)

Trypoxylon tridentatum.

Trypoxylon tridentatum, Pack. Proc. Ent. Soc. Phil. vi., p. 417.

Five ♂ ♀ specimens. (Belfrage.)

Oxybelus lætus.

Oxybelus lætus, Say, Bost. Journ. Nat. Hist. i., p. 375.

Two specimens. (Belfrage.)

Oxybelus emarginatus.

Oxybelus emarginatus, Say, Bost. Journ. Nat. Hist. i., p. 375.

Two specimens. (Belfrage.)

Crabro 10-maculatus.

Crabro 10-maculatus, Say, West. Quar. Rep. ii. p. 78.

Seven ♂ ♀ specimens. (Belfrage; Boll.)

Crabro ruffemur.

Crabro ruffemur, Pack. Proc. Ent. Soc. Phil. vi., p. 81.

One specimen. (Belfrage.)

Crabro texanus, n. sp.

♀.—Black; head very large, quadrate, densely punctured, clypeus and cheeks bright silvery, anterior orbits pale golden; mandibles except tips and scape lemon-yellow; thorax densely and coarsely punctured, upper posterior margin of prothorax, tubercles, spot behind, scutellum and postscutellum lemon-yellow; metathorax with a central longitudinal carina; tegulæ ferruginous; wings pale fuscous, the costa beyond stigma fuliginous; tips of femora, all the tibiæ and tarsi yellow, the latter tinged with ferruginous; abdomen densely punctured, a broad band near base of second segment, a narrow one on middle of fourth and a broad one on middle of fifth, lemon-yellow, terminal segment with two carina converging at tip which is acute; venter immaculate. Length .30 inch.

Three specimens. (Belfrage.)

Passalœcus annulatus.

Pemphredon annulatus, Say, Bost. Journ. Nat. Hist. i., p. 379.

One specimen. (Belfrage.)

Mimesa tibialis, n. sp.

♂ ♀.—Black, shining, clothed with a short silvery-white pubescence; face densely silvery; middle of mandibles and flagellum beneath and at tips pale ferruginous; thorax rather sparsely punctured; tubercles yellowish; metathorax reticulated, coarsely so at base; tegulæ testaceous; wings hyaline, iridescent; knees, four anterior tibiæ, posterior pair at base and all the tarsi pale yellowish or whitish, apex of posterior tibiæ of ♀ sometimes ferruginous; abdomen smooth, shining, subiridescent, slender in ♂, apex of segments obsolete dull testaceous, petiole not as long as the dilated portion of the segment. Length .27 inch.

Four specimens. (Belfrage.)

Mimesa pauper.

Mimesa pauper, Pack. Proc. Ent. Soc. Phil. vi., p. 409.

One ♀ specimen. (Belfrage.)

Philanthus ventilabris.

Philanthus ventilabris, Fabr. Ent. Syst. Suppl. p. 268.

Seven ♂ ♀ specimens. (Belfrage.)

Philanthus punctatus.

Philanthus punctatus, Say, Long's 2d Exped. ii. p. 342.

Two ♂ ♀ specimens. (Belfrage.)

Encerceris zonatus.

Philanthus zonatus, Say, West. Quar. Rep. ii., p. 79; Am. Ent. pl. 49.

One specimen. (Belfrage.)

Cerceris fumipennis.

Cerceris fumipennis, Say, Bost. Journ. Nat. Hist. i., p. 381.

Two ♀ specimens. (Boll.)

Cerceris bicornuta.

Cerceris bicornuta, Guér. Icon. Règ. Anim. p. 443.

Three ♀ specimens. (Belfrage.)

Cerceris venator.

Cerceris venator, Cress. Proc. Ent. Soc. Phil. v., p. 116.

Six ♂ specimens. (Belfrage; Boll.) This species varies much in color, especially of abdomen. The apical joint of antennæ is almost as long as the third, curved, with truncated tip and always black; the basal joint of posterior tarsi is curved or sinuated, slender at base and dilated at apex. It may prove to be the male of *bicornuta*.

Cerceris mimica, n. sp.

♀.—Ferruginous or brown-ferruginous; sides of face, middle and sides of clypeus, more or less yellow, sometimes obscure; two spots behind antennæ, spot covering ocelli and tips of mandibles black; head with dense pale golden pubescence, longer on face and cheeks; apex of clypeus with three small obtuse black teeth; antennæ ferruginous, apical half black; two transverse spots on prothorax above, sometimes a band on scutellum, postscutellum and tegulæ, yellow, sometimes obscure; narrow anterior margin of mesothorax and pleura beneath black; thorax clothed with rather dense short golden sericeous pubescence; metathorax coarsely punctured, basal triangular space punctured laterally; wings subhyaline, costa and apical margins fuliginous, costal nerve and stigma honey-yellow; legs ferruginous, tibiæ and tarsi yellow; abdomen ferruginous, closely and coarsely punctured, first segment transversely subglobose, with a yellow lateral dot; second segment yellow, with basal margin, dilated medially, ferruginous; three following segments with an apical yellow band, suddenly dilated laterally, narrow medially and slightly interrupted; sixth segment with enclosed space bounded by a sharp carina which is fringed with rather long golden hair; venter ferruginous, immaculate. Length .65 inch.

♂.—Black, clothed with a rather dense, long whitish pubescence; all beneath antennæ, two spots on prothorax above, postscutellum, sometimes band on scutellum and tegulæ, lemon-yellow; tips of mandibles black; antennæ ferruginous, apical half black, terminal joint not longer than the preceding joint, slightly bent and truncate at tip, scape sometimes varied with black; tubercles, sometimes two spots on scutellum and occasionally the sides of metathorax, ferruginous; wings paler than in ♀; legs ferruginous, anterior femora more or less black, four posterior coxæ and trochanters beneath, four anterior tibiæ and tarsi, inner edge of posterior tibiæ and their tarsi, lemon-yellow; basal joint of posterior tarsi straight, not dilated at apex; abdomen coarsely punctured, first two segments occasionally ferruginous; first segment subglobose, immaculate; four following segments each with a narrow yellow apical band rather broadly dilated laterally, broader on second segment; sixth segment with a lateral yellow spot; apical segment more or less ferruginous, truncate at tip; venter ferruginous, immaculate. Length .60—.65 inch.

Seven ♂ ♀ specimens. (Belfrage; Boll.) The ♂ closely resembles that of *venator*, but may be separated at once by the *short* slightly curved terminal joint of antennæ and by the straight, linear basal joint of posterior tarsi.

Cerceris clypeata.

Cerceris clypeata, Dahlb. Hym. Eur. i., p. 221.

One ♂ specimen. (Belfrage.)

Cerceris occipitamaculata.

Cerceris occipitamaculata, Pack. Proc. Ent. Soc. Phil. vi., p. 62.

One ♀ specimen. (Belfrage.)

Cerceris gnara, n. sp.

♂.—Black, clothed with a rather dense pale sericeous pubescence; face, orbits each side of antennæ, clypeus, mandibles except tips, scape beneath, two spots on prothorax above, postscutellum, and dot on tegulæ anteriorly, lemon-yellow; face coarsely punctured, apex of clypeus with three prominent obtuse, black teeth; flagellum fulvous beneath, apical joint as long as the preceding, curved and truncate at tip; basal space of metathorax smooth and polished; wings subhyaline, apical margin fuliginous; legs rufo-ferruginous, coxæ, spot on posterior femora beneath and apex of their flat tibie, black; trochanters, intermediate tibie and tarsi, apex of four anterior femora at tip beneath, base of posterior femora and their tibie except apex, lemon-yellow; posterior tarsi dusky; abdomen densely punctured; a small spot on each side of first segment, and a broad slightly interrupted band on second, and a very narrow apical band on segments 3—6, dilated laterally, lemon-yellow; apex black, shining, immaculate. Length .50 inch.

Two specimens from Dallas and Comal Counties. Resembles *mimica* ♂, and may be distinguished from it by the differently colored legs.

Cerceris firma, n. sp.

♀.—Black, clothed with a rather dense pale sericeous pubescence; head large, densely and coarsely punctured, ferruginous, sides of the face, and three spots on clypeus, pale yellow; front, middle of face, remainder of clypeus, lower half of cheeks and tips of mandibles, black; clypeus with a prominent process at base, on which is placed the middle yellow spot, the process broad at base and obtusely pointed at apex; interantennal carina sharply defined; antennæ black, the three basal joints ferruginous; thorax with dense coarse punctures, sparse on disk of mesothorax; two spots on prothorax above, line on postscutellum, spot on each side of metathorax and a dot on tegulæ anteriorly, yellow; sides of metathorax and sometimes the pro- and mesothorax and scutellum more or less, ferruginous; basal space of metathorax smooth and polished, with a few lateral punctures; wings subhyaline, apical margin rather broadly fuliginous, coxæ black, posterior tarsi dusky; abdomen black; first segment ferruginous with a narrow more or less indented band at apex; second segment with a broad yellow band, emarginate on the anterior middle with ferruginous; three following segments with a narrow apical yellow band, suddenly dilated laterally and generally interrupted on fifth segment; apical segment densely pubescent; venter immaculate, the base more or less ferruginous. Length .55 inch.

Four specimens. (Belfrage; Boll.) A very distinct and well marked species, easily recognized by the prominent unituberculate clypeal process.

Cerceris morata, n. sp.

♀.—Black, clothed with pale sericeous pubescence; sides of face, extending up on each side of antennæ, clypeus, mandibles except tips, spot behind summit of eyes, scape beneath, two nearly contiguous spots on prothorax above, postscutellum, a large spot on each side of metathorax and most of tegulæ, bright yellow; occiput more or less varied with ferruginous; clypeal process very prominent and much produced, quadrate, the anterior margin broad, slightly concave and tinged with fuscous, beneath it is concave, forming, as it were, a roof over apex of clypeus which is margined with black; antennæ black with basal half and apical joint pale fulvous; scutellum pale ferruginous, sometimes tinged with yellow; basal space of metathorax longitudinally striated; wings fuliginous, apical margin much darker, costal nerve and stigma fulvous; legs honey-yellow, tibiæ more or less pale yellow; abdomen with an apical pale yellow band on all the segments except the last, that on first segment slightly interrupted centrally and margined anteriorly with fulvous; that on second and fifth segments broad and regular; that on third and fourth segments broad laterally and narrowed centrally and sometimes margined anteriorly with ferruginous; apical segment dull ferruginous; venter banded with ferruginous and spotted laterally with yellow. Length .55 inch.

Two specimens. (Belfrage.) Closely resembles *vicina*, Cress., but the clypeal process is quadrate and not narrowed anteriorly as in that species, which is also smaller.

Cerceris compacta.

Cerceris compacta, Cress. Proc. Ent. Soc. Phil. v., p. 127.

Seven ♂ ♀ specimens. (Belfrage; Boll.) The yellow lateral yellow spot on metathorax is generally distinct and the first and second abdominal segments are occasionally tinged with ferruginous.

Cerceris nigrescens.

Cerceris nigrescens, Smith, Brit. Mus. Cat. iv., p. 466.

One ♀ specimen. (Belfrage.)

Cerceris fasciola, n. sp.

♂.—Black, clothed with long white pubescence; all beneath antennæ, dot behind summit of eyes, scape beneath, two spots on prothorax above, tegulæ and postscutellum, lemon-yellow; middle of clypeus prominent, depressed medially at tip, apical margin and tip of mandibles, black; antennæ pale fulvous, dusky above, apical joint as long as the preceding, curved, with obtuse tip; basal space of metathorax smooth and shining, depressed centrally and punctured laterally; wings yellowish-hyaline, the costa dusky beyond stigma; legs lemon-yellow, all the coxæ, except yellow spot on posterior pair outwardly, four anterior trochanters, base of their femora above, apex of posterior pair, and apical half of their tibiæ above, black; apex of posterior tarsi dusky; abdomen densely punctured, first segment subglobose, all the segments, except the last, with a continuous yellow apical band, slightly narrowed centrally, that on first segment indented centrally and slightly interrupted; venter black, shining, segments 2—4 with an obscure yellowish lateral spot. Length .42 inch.

One specimen from Comal Co. Allied to *deserta*, Say.

***Cerceris jucunda*, n. sp.**

♂.—Black, clothed with pale yellowish pubescence; face, orbits on each side of antennæ, clypeus, two nearly contiguous spots on prothorax above, scutellum and spot on tegulæ anteriorly, lemon-yellow; face and clypeus sparsely and coarsely punctured, the latter subconvex; mandibles entirely black; antennæ blackish above, pale fulvous beneath and at tip of apical joint which is straight and obtuse; basal space of metathorax punctured smooth at base; tegulæ pale fulvous behind; wings subhyaline, the costa beyond stigma broadly fuliginous; legs lemon-yellow, all the femora and posterior tibæ except base pale ferruginous, four anterior femora yellow at tips beneath; anterior coxæ, base of two posterior pair, base of femora more or less and spot on posterior tibæ behind, black; posterior tarsi dusky; abdomen shining, with deep, not dense, punctures, all the segments, except the last, with a continuous apical lemon-yellow band, broader on second segment; venter shining, with a continuous apical lemon-yellow band, broader on second segment; venter shining, with a median yellow band on second and third segments. Length .36 inch.

One specimen. (Coll. G. W. Belfrage.)

***Cerceris Kennicottii*.**

Cerceris Kennicottii, Cress. Proc. Ent. Soc. Phil. v., p. 128.

One ♂ specimen. (Belfrage.)

MASARIDÆ.

***Masaris texana*.**

Masaris texana, Cress. Trans. Am. Ent. Soc. iii., p. 348, ♂ ♀.

Five ♂ ♀ specimens. (Belfrage.)

***Masaris occidentalis*.**

Masaris occidentalis, Cress. Trans. Am. Ent. Soc. iii., p. 348, ♀.

♂.—Color paler than in ♀, especially the face, clypeus and prothorax which are nearly yellow; much less coarsely sculptured; clypeus smaller, feebly punctured; the front as high up as, and enclosing, the posterior ocelli, and narrow orbits yellowish; antennæ ———; thorax as in ♀, the fulvous markings paler, the prothorax anteriorly being yellow; abdomen colored much as in ♀, narrower, gradually narrowed to apex, shining at base of the segments where they are more or less contracted, apical segment bifid at tip, the teeth obtuse, distant and slightly divaricate, beneath the tip the segment is produced into a transverse process, subemarginate at apex, anterior to this on each side a prominent rounded, scale-like carina; third ventral segment with a long, longitudinally flattened process on basal middle, truncate at tip and slightly hooked posteriorly. Length .65 inch.

Two ♂ ♀ specimens. (Belfrage.) The antennæ are unfortunately wanting in the ♂ specimen. In size this species is about equal with *vespoides*.

EUMENIDÆ.

Zethus spinipes.

Zethus spinipes, Say, Bost. Journ. Nat. Hist. i., p. 387.

Four ♂ ♀ specimens. (Boll.)

Eumenes fraterna.

Eumenes fraterna, Say, Long's 2d Exped. ii., p. 344.

Four ♀ specimens. (Belfrage; Boll.)

Eumenes Belfragei, n. sp.

♀.—Head black, with large, close punctures; clypeus dull yellowish, sericeous, a large blackish spot on upper middle, which is deeply and sparsely punctured, apex deeply notched; spot between antennæ, anterior orbits not extending above the deep emargination of the eyes, narrow posterior orbits, and labrum, dull yellowish; mandibles dull fulvous; antennæ yellowish-ferruginous, sometimes coccineous, scape yellowish beneath, apical half of flagellum black; thorax coarsely and confluent punctured; prothorax ferruginous, anterior margin yellow; mesothorax generally entirely black, sometimes with a ferruginous spot on each side; scutellum ferruginous, with a narrow dull yellowish band at base; postscutellum yellow; metathorax black, covered with a short pale sericeous pile and with a large somewhat oblique yellow mark on each side, sometimes margined with ferruginous; pleura black, sericeous, a yellow spot beneath tegulæ, margined anteriorly with ferruginous; tegulæ ferruginous; wings subhyaline, costa yellow, marginal cell fuscous; legs ferruginous, tibiæ and tarsi generally more or less yellow, coxæ and base of femora black; abdomen shaped as in *fraterna*, covered with a pale golden sericeous pile; first segment deeply punctured, black, stained with ferruginous on each side of apex, apical margin narrowly yellow; second segment blackish on disk, ferruginous laterally and apically, a transverse yellowish band before the middle, not reaching the extreme side, narrow band before apical margin and sometimes a large spot on apical middle, yellow, this segment is closely punctured, the subapical margin almost smooth, a transverse fuscous depression on apical middle, apical margin depressed and somewhat reflexed, dull ferruginous; remaining segments more or less tinged with yellowish; venter fusco-ferruginous, apical margin of second and following segments more or less yellowish. Length .55—.60 inch.

♂.—Clypeus entirely yellowish, silvery-sericeous; apex of antennæ fulvo-ferruginous, the apical joint small, acute, palé yellow.

Seven ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Eumenes Bollii, n. sp.

♀.—Clothed with a short dense dull yellow pubescence; head black, deeply punctured; clypeus yellow, sparsely punctured, apex deeply notched; spot between antennæ, anterior orbits not extending beyond emargination of eyes, narrow posterior orbits and labrum, also yellow; mandibles dull fulvous; antennæ black, the scape, two or three basal joints of flagellum above, and most of the joints beneath rufo-fulvous, sometimes almost coccineous; thorax with large, not close punctures; prothorax yellow-ferruginous, more or less yellowish in front; mesothorax black, sometimes tinged laterally with ferru-

ginous; scutellum ferruginous, black posteriorly; postscutellum yellow; metathorax yellow-ferruginous, black on basal middle and down the deeply channelled middle to the apex; pleura ferruginous, with anterior and posterior margins black, in one specimen entirely black, with ferruginous spot beneath tegulæ; wings fusco-hyaline, paler at apex and on posterior margin, costa yellow, blackish in marginal cell; legs yellow-ferruginous, tibiæ and tarsi yellow; abdomen shaped much like that of *Belfragei*, but stouter, the second segment more convex, almost globose; first segment smooth, polished, with dense short erect yellowish pubescence, ferruginous, base and disk of apical half black, narrow apical margin yellow; second segment shining, with sparse fine punctures and short dense yellowish pubescence, yellow with a large blackish angular band, sometimes quite broad, starting from the basal middle and forking posteriorly at about the basal third, reaching the lateral margin at the apex, from whence it narrowly margins the segment to the base, a shallow depression near the apical middle, apical margin narrow, deeply impressed and dull ferruginous; remaining segments ferruginous, tinged with yellowish above; venter ferruginous, more or less tinged with yellowish. Length .55 inch.

♂.—Smaller, less robust; clypeus narrower, and silvery-sericeous; apical joint of antennæ slender and acute; angular band on second abdominal segment ferruginous, remaining segments black, banded with yellow. Length .48 inch.

Three ♂ ♀ specimens. (Belfrage.) A very handsome and distinct species.

Monobia quadridens.

Vespa quadridens, Linn. Syst. Nat. ii., p. 951.

Seven ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Rhygchium dorsale.

Vespa dorsalis, Fabr. Ent. Syst. ii., p. 265.

Rygchium balteatum, Say, Bost. Journ. Nat. Hist. i., p. 383.

Rygchium louisianum, Sauss. Mon. des Guêpes Sol. p. 106, pl. 13, fig. 9.

Twenty-two ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.) This fine species is exceedingly variable both in size and color, being sometimes almost entirely black, and sometimes entirely ferruginous, except the yellow band on first abdominal segment which is always conspicuous.

Odynerus tigris.

Odynerus tigris, Sauss. Rev. Mag. Zool. 1857, p. 273.

Five ♂ ♀ specimens. (Belfrage; Boll.)

Odynerus quadrisectus.

Odynerus quadrisectus, Say, Bost. Journ. Nat. Hist. i., p. 385.

Odynerus Bellone, St. Farg. Hym. ii., p. 660.

Two ♀ specimens. (Boll.)

Odynerus texanus, n. sp.

♀.—Ferruginous, closely and confluent punctured, clothed with a very short, golden sericeous pile, more obvious in certain lights; clypeus large, convex, sparsely punctured, apex notched, the angles prominent and tipped with black; a short sharp carina between antennæ; the front except a spot above base of antennæ and emargination of eyes which are yellowish, a large spot enclosing ocelli and two short oblique lines on occiput above, black; inner edge and apex of mandibles also black; antennæ black, scape and two basal joints of flagellum ferruginous; mesothorax black on anterior middle and on each side behind; scutellum narrowly black on anterior and posterior margins; postscutellum yellow-ferruginous; metathorax rugose above, broadly and deeply excavated behind, the excavation shining and somewhat transversely wrinkled, lateral angles prominent; wings fuscous; tarsi fuscous; abdomen long, fusco-ferruginous, sericeous; first segment narrower than second, campanulate, smooth and rounded at base, very sparsely and finely punctured, black at base, narrowly dull yellowish at apex; second segment more thickly punctured than the first, narrowly black at base; the following segments densely punctured; apical margin of the segments flat, not at all reflexed; venter entirely ferruginous. Length .65 inch.

One specimen. (Coll. G. W. Belfrage.) This is of a more elongate form than any of the following species, being more of the shape of *quadrisectus*.

Odynerus elusinus, n. sp.

♀.—Ferruginous, coarsely and confluent punctured, clothed with a short, erect, yellow-fuscous pubescence; head black, clypeus broad, narrowly truncate at tip, with large sparse shallow punctures, pale yellow, more or less stained with ferruginous on the disk; front with a broad ferruginous or yellow-ferruginous band filling in the emargination of eyes and enclosing two black somewhat oblique marks at base of each antenna; occiput, cheeks and mandibles ferruginous; posterior orbits sometimes yellowish; antennæ black, scape and two basal joints of flagellum ferruginous or coccineous; prothorax ferruginous, with a more or less distinct yellow band on anterior middle, sometimes continued narrowly on posterior margin; mesothorax black, a broad ferruginous stripe on disk not reaching anterior margin, before scutellum two short excavations; scutellum flat, shining, with large sparse punctures, posterior margin narrowly black; postscutellum yellow; metathorax deeply excavated behind, lateral angles more or less yellow, posterior face shining, black at tip, transversely somewhat obliquely striated; pleura ferruginous laterally, with a yellow spot beneath tegulæ, beneath black; tegulæ yellow, pupilled with ferruginous; wings subhyaline, sometimes fusco-hyaline, costa yellow to stigma, fuliginous beyond; legs ferruginous, tibiæ more or less yellow on outer side; abdomen strongly pale sericeous; first segment as broad as second, rounded at base, smooth, impunctured, ferruginous, black at base, with a broad yellow band at apex, suddenly dilated laterally; second segment smooth, impunctured, except subapical margin which is deeply punctured, ferruginous, base narrowly black, apex broadly yellow, gradually dilated laterally; remaining segments deeply and coarsely punctured, yellow, black or ferruginous at base,

apical margin of the segments flat, not at all reflexed; venter yellow, ferruginous at base, sometimes the third segment has a broad black band at base. Length .60 inch.

♂.—Color pale yellow-ferruginous, much paler than ♀; clypeus entirely pale yellow; mandibles yellowish outside, as will as scape beneath; two apical joints of antennæ small, ferruginous, the terminal one acute; upper anterior margin of prothorax narrowly yellow; mesothorax ferruginous, black on anterior and posterior margins; tibiæ and tarsi pale yellow; wings yellowish-fuscous; color of abdomen much paler than in ♀, the apical yellow band on first segment not dilated laterally, sixth and seventh segments pale ferruginous. Length .55 inch.

Four ♂ ♀ specimens. (Belfrage.) Has much the general appearance of *Rhygchium dorsale*, and in color resembles several of the following species, but may be distinguished at once by the second segment (as well as first) except apex being smooth and impunctured.

Odynerus evectus, n. sp.

♀.—Head ferruginous, coarsely and irregularly punctured, cheeks and clypeus sometimes yellowish-ferruginous, emargination of eyes, broad triangular spot above base of antennæ, and upper margin of clypeus yellow; clypeus broad, sparsely punctured apex narrowly truncate; antennæ black, two basal joints ferruginous; thorax coarsely, confluent punctured; prothorax ferruginous, with a broad yellow band anteriorly; mesothorax ferruginous, more or less black on anterior middle; scutellum ferruginous, sometimes with a yellow dot on each side; postscutellum yellow; metathorax broadly concave behind, blackish, lateral angles broadly yellow, posterior face shining, sparsely punctured above, obliquely striated beneath; pleura black, with a partly ferruginous and partly yellow spot beneath tegulæ; tegulæ yellowish, pupilled with ferruginous; wings yellowish-fuscous, darker on costa; legs ferruginous, spot on intermediate coxæ and tips of their femora beneath, yellow; abdomen short, stout, more or less strongly sericeous; first segment as broad as second, smooth and rounded at base, impunctured, ferruginous, black on basal middle and on disk, a yellow band on apical margin suddenly dilated into a spot on each side; second segment strongly rather coarsely punctured, black, with a more or less distinct ferruginous spot on each side, apex depressed, coarsely and deeply punctured before apical margin which is smooth and impunctured; remaining segments coarsely punctured, black, the third and fourth segments with a narrow yellow apical margin; apical margin of the segments flat, not at all reflexed; venter black, varied with ferruginous and yellow; sometimes the yellow markings are quite obscure. Length .50—.55 inch.

Two specimens. (Belfrage.) Easily recognized from *clusinus* by the second abdominal segment being strongly punctured.

Odynerus designatus, n. sp.

♀.—Black, subsericeous; head shining, rather closely and deeply punctured, a duplex spot between antennæ, anterior orbits not reaching beyond emargination of eyes, and a broad line on upper posterior orbits yellow-ferruginous; clypeus broad, with sparse shallow punctures, ferruginous, upper margin, broader laterally, yellow, apex deeply emarginate, angles acute; mandi-

bles ferruginous, black at tip and on inner side and with a yellow spot at base; antennæ black, three basal joints yellow-ferruginous; thorax deeply, rather closely punctured; prothorax ferruginous, with a broad yellow band in front; mesothorax black; scutellum and postscutellum yellow, the former black at base and ferruginous medially; metathorax black, deeply and broadly excavated behind, a large yellow spot on each side, the lateral angles prominent and dentate, posterior face shining and obliquely striated; pleura black with a yellow spot beneath tegulæ; tegulæ yellow, pupilled with brownish; wings fusco-hyaline, darker along costa and in marginal cell, subviolaceous, base yellow; legs yellow-ferruginous, tips of femora and tibiæ beneath yellowish; abdomen much as in *evectus*, rather narrower, first segment at base and disk sparsely punctured; apical margin of second segment rather strongly reflexed, the brown-ferruginous blotch on each side of this segment large and irregular, enclosing near lateral margin a small yellow spot. Length .50 inch.

One specimen. (Coll. G. W. Belfrage.) Very near to *evectus*, from which it may be distinguished by the reflexed posterior margin of second abdominal segment.

Odynerus delicatus, n. sp.

♀.—Uniform fulvo-ferruginous, densely and confluent punctured, sides of thorax and abdomen whitish sericeous; a large triangular spot on middle of front, anterior orbits as far as emargination of eyes, upper half of clypeus, spot at base of mandibles, spot behind eyes, broad band on anterior margin of prothorax, two spots on scutellum, postscutellum, large spot on each side of metathorax, spot beneath tegulæ, all pale yellow; antennæ ferruginous, blackish at tips; tegulæ pale yellow, pupilled with fulvous; wings fusco-hyaline, darker along costa; first segment of abdomen smooth, rounded at base, with a few scattered punctures, a transverse pale yellow spot on each side, acute within and confluent with the rather broad pale yellow apical margin; second segment deeply rather coarsely punctured, somewhat depressed before apex where the punctures are deeper and coarser, a broad yellowish-white band on apical margin, before which on the disk there is a triangular blackish stain, extreme apical margin smooth, impunctured, flat, not at all reflexed; apical margin of third segment also yellowish white; apical margin of second and third ventral segments whitish. Length .45 inch.

One specimen from Comal Co. Very distinct by the uniform fulvo-ferruginous color and shape of yellow markings.

Odynerus cultus, n. sp.

♂.—Black, coarsely, confluent punctured, clothed with a very short white sericeous pile; a transverse subtriangular spot above base of antennæ, anterior orbits as far up as emargination of eyes and a large spot behind eyes, yellow-ferruginous; clypeus broad, flattened, sparsely punctured, yellow, apex broadly truncate with lateral angles prominent; labrum yellow; mandibles ferruginous on outer side; antennæ black, scape yellow beneath, apical joint of flagellum narrow, long, curved, dull ferruginous; prothorax dull ferruginous, dull yellow on anterior margin, and narrowly on posterior margin; mesothorax entirely black; scutellum with a dull ferruginous spot on each side; postscutellum, a large spot on each side of metathorax and spot beneath tegulæ

ferruginous; posterior face of metathorax deeply excavated, obliquely striated towards apex; tegulæ yellow-ferruginous, pupilled with brown; wings fuscohyaline, marginal cell fuliginous; legs pale ferruginous, tibiæ more or less yellow beneath; abdomen shaped as in *clusinus*, strongly sericeous; first segment smooth, rounded at base, impunctured, ferruginous, more or less blackish on basal middle, with a narrow yellow apical margin; second segment black, rather closely and strongly punctured, depressed and coarsely punctured before apex which is broadly yellow and slightly reflexed, a small ferruginous spot on each lateral margin; the following segments black, the third, fourth and fifth with a narrow yellow band at apex; second and following segments with long, fine pale pubescence toward apex; venter black, first and second segments black, the second, third and fourth with a narrow yellow apical band. Length .45 inch.

Two specimens from Comal Co.

Odynerus verus, n. sp.

♀.—Size and shape of *cultus*, strongly and confluent punctured; head broad, ferruginous, spot at base of each antenna and a large blotch on vertex enclosing ocelli and extending to middle of occiput black; clypeus broad, coarsely punctured, apex truncate with prominent lateral angles; antennæ black, scape ferruginous; prothorax ferruginous, narrowly yellowish on anterior margin; mesothorax black, sometimes with a ferruginous spot on posterior middle; scutellum ferruginous, narrowly black posteriorly; postscutellum yellow; metathorax ferruginous, blackish on middle of posterior face which is deeply concave and obliquely striated towards apex, lateral angles yellow above; pleura black, with a yellow spot beneath tegulæ; tegulæ yellow, pupilled with ferruginous; wings subhyaline, more or less tinged with yellow or fuscous, costa yellow or fuscous, marginal cell fuliginous; legs uniformly pale ferruginous; abdomen slightly sericeous; first segment smooth, rounded at base, impunctured, ferruginous, a black spot on basal middle and another near apical middle, apex with a yellow band which is dilated into a spot on lateral margin; second segment strongly not densely punctured, more closely and coarsely punctured before apex which is broadly subdepressed, black, with a large ferruginous blotch on each side, apical margin broadly lemon-yellow; three following segments black, with narrow yellow apical margins; apical segment ferruginous; segments not reflexed at apex; venter ferruginous, second segment more or less stained with blackish, apical margins of second, third and fourth segments narrowly yellowish. Length .45 inch.

♀ var.—Color pale ferruginous, with the markings bright yellow; spot on vertex sometimes almost obsolete; emargination of eyes and upper margin of clypeus sometimes yellow; anterior margin of prothorax broadly yellow; mesothorax entirely ferruginous, or with a black spot on anterior middle; scutellum with a yellow spot on each side; pleura ferruginous, with yellow spot beneath tegulæ; tibiæ more or less yellow beneath; abdomen pale ferruginous, with the yellow apical margins bright; venter ferruginous. Length .45 inch.

♂.—Smaller than ♀, more strongly sericeous; vertex black; a very large triangular mark on middle of front, anterior orbits filling in emargination of eyes, clypeus, labrum, base of mandibles and scape beneath, cream-white;

cheeks sometimes black beneath; clypeus sparsely and finely punctured; tip of antennæ as in *cultus*; yellow band in front of prothorax always distinct; mesothorax varies from entirely black to almost entirely ferruginous; scutellum generally black with a yellow spot on each side, sometimes black immaculate, sometimes almost entirely yellow; metathorax pubescent ferruginous, without yellow spot on each side; pleura black or ferruginous, with yellow spot beneath tegulæ; abdomen varies as in ♀. Length .45 inch.

Thirteen specimens. (Belgrave; Boll.) A very variable species. The clypeus is not so broadly truncate at tip as that of *cultus*, which is a larger, darker colored and more strongly sericeous species.

Odynerus ductus, n. sp.

♀.—Ferruginous, coarsely and confluent punctured; spot at base of each antenna, and large mark covering vertex, extending to occiput, black; clypeus flattened, longitudinally rugulose, apex truncate; sometimes the black on vertex is confluent with the spot at base of each antenna, leaving a subordinate ferruginous spot on middle of the front; antennæ black, scape ferruginous; anterior margin of prothorax sometimes yellowish; mesothorax entirely black; posterior margin of scutellum narrowly black; postscutellum yellow; metathorax black, very broadly and deeply excavated behind, lateral angles prominent, subserrate and ferruginous above, posterior face shining, obliquely striated; pleura black with a large yellow-ferruginous spot beneath tegulæ; tegulæ ferruginous, pupilled with fuscous; wings fusco-hyaline, fuscous along costa and in marginal cell; legs uniformly ferruginous; abdomen subsericeous; first segment smooth, impunctured, subopaque, ferruginous, base abrupt, more or less of basal middle extending in a gradually attenuated line to apical margin, black, apical margin yellow, suddenly dilated on each side; second segment shining, very sparsely punctured at base, the punctures becoming more close to apex, before which they are deep and coarse, black, with a large ferruginous blotch on each side, apical margin narrowly yellow; third and fourth segments closely and coarsely punctured, black, apical margin narrowly yellow; apex ferruginous; apical margin of second and third segments strongly reflexed; venter mostly ferruginous. Length .45—.50 inch.

♂.—Smaller, more strongly sericeous; head black, spot above base of antennæ, anterior orbits as far up as emargination of eyes and clypeus yellow; line behind eyes, labrum and mandibles ferruginous; scape yellow in front, apical joint of flagellum long, narrow, curved, rufo-piceous; tibiæ more or less yellowish; disk of first abdominal segment broadly black, ferruginous blotch on each side of second segment much reduced. Length .40 inch.

Five specimens. (Belgrave.) This is allied to *evectus* in general appearance, but may be separated at once by the strongly reflexed apical margin of second and third abdominal segments.

Odynerus fnsus, n. sp.

♀.—Coarsely, confluent punctured; head black; cheeks, paler above, and a stain across the front, ferruginous; spot above base of antennæ, anterior orbits as far up as emargination of eyes, broad upper margin of clypeus and spot at base of mandibles, yellow; remainder of clypeus, labrum and mandibles ferruginous; clypeus broad, flattened, sparsely punctured, truncate at tip;

antennæ black, two or three basal joints ferruginous; prothorax ferruginous, with a narrow yellow band in front; mesothorax black, with a dull reddish spot over tegulæ; scutellum and postscutellum ferruginous, the former with an obscure yellowish spot on each side; metathorax broadly excavated behind, ferruginous, lateral angles prominent, coarsely serrate, yellow, posterior face blackish medially; pleura black, with a small yellow spot beneath tegulæ, stained anteriorly with ferruginous; tegulæ yellowish, pupilled with ferruginous; wings fusco-hyaline, fuliginous along costa and in marginal cell, violaceous; legs ferruginous, knees and tibiæ beneath yellowish; abdomen robust, sericeous; first segment rounded, sparsely punctured, more closely so towards apex, ferruginous, a black spot on basal middle, extending in a narrow line nearly to apex, apical margin broadly yellow, suddenly dilated on each side; second segment closely and strongly punctured, black, with a large dull ferruginous blotch on each side separated before apex by a slender black line, apical margin depressed, densely and coarsely punctured, yellow, the margin strongly reflexed; remaining segments densely and strongly punctured, ferruginous, more or less black at base, apical margins flat, that of third segment yellowish; venter ferruginous, a small yellow spot on each apical corner of second segment. Length .60 inch.

♂.—Much smaller than ♀; spot above base of antennæ much larger, subtriangular and confluent with a spot between antennæ; clypeus entirely yellow as well as outer side of mandibles; scape beneath pale yellow, apical joint of flagellum long, narrow, curved, pale yellowish; mesothorax more or less varied with ferruginous, and black, sometimes entirely ferruginous; scutellum generally with a yellow spot on each side; postscutellum always ferruginous; pleura generally ferruginous, with the yellow spot beneath tegulæ conspicuous; knees, tibiæ and tarsi more or less yellow; second abdominal segment ferruginous, more or less black at base, besides the broad yellow apical band there is sometimes a rounded yellow spot on each side between base and apex; apical margins of segments 3—5 narrowly yellow. Length .45 inch.

Four specimens. (Belfrage.) The apical margin of the second segment only is reflexed and the first abdominal segment is strongly punctured.

***Odynerus firmus*, n. sp.**

♀.—Black, subsericeous; clypeus generally more or less stained with pale ferruginous, with a cuneiform yellowish mark on each side at base, pointing within, the points sometimes confluent; mandibles ferruginous, black at tips, sometimes with a yellowish spot at base; anterior orbits as far up as the emargination, sometimes a transverse mark above insertion of antennæ, a large spot behind summit of eyes, and scape of antennæ in front, yellowish or yellowish-ferruginous; prothorax black, brown or ferruginous, with a more or less distinctly defined yellow band in front; tegulæ yellow, pupilled largely with brown ferruginous; postscutellum and a large spot on each side of metathorax, bright lemon-yellow; wings subhyaline, subviolaceous, costa rather broadly fuliginous; legs ferruginous, coxæ, trochanters, and base of femora, black; first segment of abdomen more or less ferruginous, with a central black mark, sometimes larger, sometimes smaller, its apical margin lemon-yellow, dilated into a large angular spot on each side of the segment; apical margin of second

and third segments lemon-yellow, sometimes tinged anteriorly with ferruginous; apical margin of fourth segment narrowly yellowish-ferruginous; second segment has sometimes an obscure ferruginous spot on each side; the yellow posterior margin of the first segment has a very fine brown or black, longitudinal, abbreviated line down the middle, and a transverse one on each side; beneath, the segments have a narrow pale posterior margin, and a yellow spot on second and third segments, largest on the second. Form robust, compact; head and thorax densely and coarsely punctured, with as short, fine, golden pubescence; clypeus flattened, apex truncate; metathorax short, abrupt, broadly excavated behind, lateral angles prominent; abdomen broad ovate; first segment smooth, pale sericeous; remaining segments closely punctured, more coarsely so on posterior submargin, which is depressed and subsinuous on second segment. Length .45—.55 inch.

The ♂ has the clypeus, anterior orbits, spot above antennæ, labrum, base of mandibles, scape in front, coxæ in front, most of legs in front, sometimes a spot on each side of second abdominal segment, apical margin of fourth and fifth segments beneath, lemon-yellow; sides of metathorax ferruginous, the upper part yellow; sometimes there is a small yellow spot beneath anterior wing; tip of antennæ ferruginous, hooked. Length .45 inch.

Described from three ♀, two ♂, specimens. Allied in form and somewhat in ornamentation to *O. Boscii*, St. Farg. This also occurs in Colorado.

***Odynerus geminus*, n. sp.**

♀.—Black, coarsely and confluent punctured, clothed with a short pale pubescence, longer and more dense on apex of second and following abdominal segments; clypeus and a large spot behind summit of eyes ferruginous; spot above base of antennæ, anterior orbits as far up as emargination of eyes and upper margin of clypeus, yellow; clypeus broad, flattened, sparsely punctured, apex narrowly truncate; antennæ black, scape dull ferruginous; prothorax ferruginous, anterior margin narrowly yellow; scutellum with an obscure ferruginous dot on each side; postscutellum lemon-yellow; lateral angles of metathorax yellow, posterior face deeply excavated, obliquely striated; pleura entirely black; tegulæ ferruginous, margined with yellowish; wings fusco-hyaline, darker along costa, violaceous, marginal cell fuscous; legs ferruginous, coxæ black, knees and tibiæ beneath tinged with yellowish; abdomen subsericeous; first segment smooth, impunctured, a ferruginous stain on each side, the apical margin rather broadly yellow, suddenly dilated on each side; second segment shining, deeply, finely but not densely punctured, apical margin much depressed especially on middle and coarsely punctured, narrowly lemon-yellow, sometimes a small transverse fulvous spot on each side; remaining segments generally immaculate, coarsely punctured, sometimes the third segment has a narrow margin at apex; apical margin of all the segments flat, not at all reflexed; venter black, a small yellow spot on each apical corner of second segment. Length .50 inch.

Three specimens. (Belfrage.) Closely allied to *firmus*, of which it may prove to be a variety; the pleura is however entirely black.

Odynerus manifestus, n. sp.

♂ ♀.—Black, shining, clothed with a rather dense short pale pubescence, longer and more dense on abdomen; head and thorax with coarse, rather sparse punctures; a triangular spot between antennæ, anterior orbits as far up as emargination of eyes, spot behind summit of eyes and the clypeus, yellow or yellow-ferruginous; clypeus narrowly truncate at tip, densely punctured, flattened on disk where it is stained with fuscous or black in ♀; mandibles ferruginous; antennæ black, scape ferruginous, yellow beneath, apical joint in ♂ long, narrow, curved, dull ferruginous; prothorax tinged anteriorly with ferruginous, with a broad yellow band in front; a rounded spot on each side of scutellum, the postscutellum, a spot on each side of metathorax above and a rounded spot beneath tegulæ, yellow; metathorax deeply concave behind, the posterior face obliquely wrinkled; tegulæ yellow, pupilled with ferruginous; wings fusco-hyaline, subviolaceous, fuliginous along costa and in marginal cell; legs ferruginous, base black, tips of femora beneath and the tibiæ more or less yellow; abdomen almost polished, rather densely pubescence; first segment sparsely punctured, base roundly truncate, apical margin with a yellow band confluent laterally with a large yellow mark which is pointed towards disk; second segment strongly, rather closely punctured, more coarsely and densely so towards apex, which is depressed and broadly evenly margined with yellow; third and fourth segments narrowly margined at apex with yellow; apical segment black; apical margin of the segments flat, not at all reflexed; venter black, with a yellow spot on each apical corner of second segment. Length .50—.55 inch.

Four specimens. (Belfrage.) This fine species is more pilose than any other of the genus known to me from Texas.

Odynerus foraminatus.

Odynerus foraminatus, Sauss. Mon. des Guêpes Sol. p. 180.

Five ♂ ♀ specimens. (Belfrage; Boll.)

Odynerus campestris.

Odynerus campestris, Sauss. Mon. des Guêpes Sol. p. 137.

Two ♂ ♀ specimens. (Belfrage.)

Odynerus uncinatus.

Odynerus uncinata, Say, Bost. Journ. Nat. Hist. i., p. 386.

One ♀ specimen. (Belfrage.)

Odynerus colon, n. sp.

♀.—Black, densely and coarsely punctured; spot between base of antennæ, dot in emargination of eyes, upper margin of clypeus, spot on base of mandibles, short line or spot behind eyes, scape beneath, two sublunate spots on anterior margin of prothorax, dot behind tegulæ, postscutellum, sometimes an obsolete spot on each side of metathorax, a rounded spot beneath tegulæ, apical margins of abdominal segments 1—5, broader on first and second, a large oblique spot on each side of first and a small round spot on each side of second about midway between base and apex, all lemon-yellow; tegulæ fulvous, pupilled with fuscous; wings fusco-hyaline, darker along costa and in marginal cell; legs black, tips of femora, tibiæ and tarsi fulvo-ferruginous;

abdomen strongly and closely punctured, coarsely so towards apex, apical margins of first and second segments slightly reflexed; second ventral segment margined at apex with yellow. Length .40 inch.

♂.—Clypeus entirely, narrow anterior orbits, labrum and stripe on mandibles, yellow; clypeus deeply notched at apex; antennæ sometimes rufo-testaceous beneath; first and second abdominal segments more strongly reflexed than in ♀. Length .35 inch.

Four specimens. (Belfrage.) Also found in Colorado.

Odynerus fulvipes.

Odynerus fulvipes, Sauss. Mon. des Guêpes Sol. Suppl. p. 205.

One ♀ specimen. (Belfrage.)

Odynerus fundatus, n. sp.

♀.—Black, closely and coarsely punctured, subsericeous; small spot between base of antennæ, dot in emargination of eyes, upper margin of clypeus, labrum, spot on base of mandibles, spot behind eyes, broad anterior margin of prothorax, its posterior margin narrowly, dot behind tegulæ, postscutellum, lateral angles of metathorax, round spot beneath tegulæ, knees beneath, broad apical margins of first and second abdominal segments, that on the first dilated laterally, a round spot on each side of second segment near base, narrow apical margins of third and fourth segments, and a spot on each apical corner of second ventral segment, all lemon yellow; sometimes there is a yellow dot on posterior middle of mesothorax; clypeus coarsely punctured, subemarginate at tip; mandibles long, grooved, tinged with ferruginous towards apex; scape rufo-piceous, yellowish beneath; tegulæ ferruginous, sometimes pupilled with dusky; wings fusco-hyaline, fuscous along costa; legs ferruginous, coxæ black; abdomen more or less strongly sericeous; first segment rounded at base, densely and strongly punctured, narrower than second segment, sometimes more or less tinged with ferruginous and the apical yellow band sometimes quite narrow; second segment densely and strongly punctured, coarsely so towards apex, remaining segments less strongly punctured. Length .35—.40 inch.

♂.—Strongly sericeous; clypeus entirely, a cuneiform mark between antennæ, anterior orbits as far up as emargination of eyes, and short line behind eyes, white or pale yellow; clypeus deeply notched at tip; antennæ long, scape whitish beneath, flagellum fulvous beneath, thickened at tips, apical joint shaped as usual, entirely black; posterior margin of prothorax sometimes entirely black; spot on posterior middle of mesothorax often present; metathorax sometimes entirely black; tibiæ yellowish beneath; all the abdominal segments above except the last, and the second ventral, margined with yellow at apex. Length .30—.35 inch.

Twelve specimens. (Belfrage; Boll.) Closely allied to *anormis*, Say, from which it may be distinguished by the ferruginous legs.

Odynerus anormis.

Eumenes anormis, Say, Long's 2d Exped. ii., p. 346.

Nine ♂ ♀ specimens. (Belfrage; Boll.)

Odynerus austrinus, n. sp.

♂ ♀.—Differs from *fundatus* only as follows:—Clypeus of ♀ with a broad arcuate yellowish line above; first abdominal segment longer, more sparsely punctured at base and with a narrow, transverse, central yellow band slightly interrupted on the disk; spot on posterior middle of mesothorax always present. Length .30—.35 inch.

Four specimens. (Belfrage.) Also closely allied to *vagus*, from which it differs by the ferruginous legs and much less reflexed apical margin of second abdominal segment.

Odynerus vagus.

Odynerus vagus, Sauss. Rev. Mag. Zool. 1857, p. 277.

One ♀ specimen. (Belfrage.)

Odynerus Taos.

Odynerus Taos, Cress. Trans. Am. Ent. Soc. i., p. 381.

Two ♂ ♀ specimens. (Belfrage.)

Odynerus bellulus, n. sp.

♀.—Black, densely and strongly punctured; head large, subquadrate; subcordate spot above base of antennæ, upper margin of clypeus, and spot behind summit of eyes, yellowish-white; emargination of eyes filled in with silvery pubescence; clypeus broad, sometimes tinged with ferruginous, apex subemarginate; scape of antennæ sometimes ferruginous; anterior margin of prothorax, interrupted medially, posterior margin of scutellum or a spot on each side and a spot beneath tegulæ, yellowish-white; postscutellum, metathorax, legs and basal segment of abdomen ferruginous; metathorax deeply excavated posteriorly, the sides clothed with a silvery pile; tegulæ yellow, pupilled with ferruginous; tarsi dusky; wings subhyaline, costa and marginal cell dusky; abdomen shaped as in *rufinodus*, densely and strongly punctured, apical margins of first and second segments narrowly whitish and strongly reflexed, second segment with a rounded whitish spot on each side near base; apical segments finely and sparsely punctured; venter ferruginous at base, second segment margined at apex with whitish. Length .28 inch.

Two specimens. (Belfrage.) Closely allied to *rufinodus*, Cress., from Colorado, but easily distinguished by the white markings of face and spot on each side of second abdominal segment.

Odynerus electus, n. sp.

♂.—Black, opaque, densely punctured, clothed with a pale sericeous pile, dense in emargination of eyes; clypeus entirely pale yellow, apex deeply notched; antennæ long, thickened towards apex, scape yellowish beneath, apex of flagellum tinged with ferruginous, the apical joint minute, curved; anterior margin of prothorax, slightly interrupted medially, posterior margin of scutellum also slightly interrupted medially, and spot beneath tegulæ, yellowish-white; postscutellum prominent; metathorax excavated posteriorly, sides rather densely pubescent, apex with a prominent whitish scale on each side; tegulæ pale yellowish, pupilled with fuscous; wings hyaline, very faintly dusky along costa and in marginal cell; legs black, knees beneath and tibiæ

outwardly yellowish-white; abdomen densely punctured, ferruginous, first and second segments narrowly margined at apex with whitish, dilated laterally on second segment; first segment rounded at base, cup-shaped; apical segment more or less dusky; venter ferruginous, apical margin of second segment white. Length .28 inch.

One specimen. (Coll. G. W. Belfrage.)

Pterochilus 5-fasciatus.

Pterochilus 5-fasciatus, Say, Long's 2d Exped. ii., p. 317.

Two ♀ specimens. (Belfrage; Heiligbrodt.)

Pterochilus texanus, n. sp.

♀.—Black; the large broad transverse convex clypeus, labrum and mandibles and a dot between insertion of antennæ, fulvo-ferruginous; anterior orbits as far up as sinus and a line on posterior orbits yellow; palpi fulvous, ciliated with long curved yellowish hair; antennæ blackish, the scape and flagellum beneath fulvo-ferruginous; prothorax fulvo-ferruginous, narrowly margined with yellow anteriorly; mesothorax closely punctured, with a small obscure ferruginous spot on each side over tegulæ; scutellum and postscutellum fulvous, a spot on each side of the former and the anterior margin of the latter, yellow; posterior margin of scutellum narrowly black; metathorax with a large fulvous spot on each side of the smoothly excavated middle, tinged with yellowish within; a rounded yellowish spot beneath tegulæ, which is yellowish-fulvous, pupilled with brownish; wings yellow-hyaline, dusky before apices; legs fulvous, posterior tibiæ yellow behind; abdomen oblong-ovate, densely rugosely punctured, somewhat shining, first segment broadly yellow at apex, fulvous at base with a central longitudinal black mark; second segment with a rather narrow apical yellow band, slightly dilated laterally and on each side near base a large fulvous spot; third segment with an undulate apical yellow band; two following segments each with a broad yellow band at apex, emarginate on anterior middle and enclosing a small black spot on each side; apical segment and venter black, shining. Length .50 inch.

One specimen. (Coll. G. W. Belfrage.) Resembles *5-fasciatus* in miniature.

Pterochilus laticeps, n. sp.

♀.—Black, closely and strongly punctured, clothed with a very short, more or less brilliant silvery sericeous pile, more dense on pleura and metathorax; head large, much broader than thorax, two approximate dots above base of antennæ, anterior orbits as far up as emargination of eyes, short line behind eyes and a large spot on each side of clypeus at base pale yellowish; apical margin of clypeus, labrum and mandibles except tips bright ferruginous; clypeus large, broad, sparsely punctured, truncate at tip; palpi honey-yellow, ciliated with long yellowish hairs; antennæ fulvous, blackish above towards apex, scape sanguineous; band on prothorax above acute laterally, two spots on scutellum, posterior margin of postscutellum, large spot beneath tegulæ, and a rounded spot on each side of metathorax, pale yellowish; metathorax but slightly excavated behind; tegulæ whitish, with a small central fuscous spot; wings hyaline, dusky along costa and narrowly at apex; legs ferruginous, coxæ mostly blackish, anterior femora beneath and stripe on outside of four

posterior tibiæ, whitish; abdomen strongly sericeous with whitish pile, densely rather coarsely punctured; first segment rather small, campanulate, rounded at base, ferruginous, blackish at base, apex broadly yellowish-white; second segment black with a large ferruginous blotch on each side, obscurely confluent on disk, apex broadly yellowish-white, squarely indented on each side of middle; remaining segments blackish, margined at apex with whitish; venter black, second segment stained laterally with reddish and margined at apex with whitish, remaining segments, except last, with a whitish lateral spot. Length .40 inch.

♂.—Clypeus white with a minute median black dot, covered entirely with a bright silvery pile; antennæ long, thickened toward tips, fuscous above, scape yellow beneath, flagellum fulvous beneath, the extreme apex fulvous, and slightly hooked; abdomen more slender than in ♀, without any ferruginous coloring, with white apical bands as in ♀, the second segment having on each side about midway a rounded white spot. Length .38 inch.

Three specimens. (Belfrage.)

VESPIDÆ.

Polistes canadensis.

Vespa canadensis, Linn. Syst. Nat. i., p. 952.

Three ♂ ♀ specimens. (Belfrage.)

Polistes rubiginosus.

Polistes rubiginosus, St. Farg. Hym. i., p. 524.

Fifteen ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Polistes perplexus, n. sp.

♂.—Ferruginous, strongly golden sericeous; face and clypeus flat, dull yellowish-white, pale on orbits and above insertion of antennæ; mandibles and cheeks beneath more or less dull yellowish-white; antennæ ferruginous, paler at base beneath, the joints above more or less black, especially those at apex; collar more or less black, prothorax generally narrowly margined with pale yellow; mesothorax black, with two central, longitudinal, more or less distinct ferruginous lines; scutellum sometimes divided centrally by a black line; metathorax with a broad deep longitudinal groove, finely and transversely aciculated, ferruginous, generally with three longitudinal black lines which are sometimes subobsolete, sometimes the metathorax is entirely ferruginous excepting the groove which is always black, sometimes entirely black excepting a spot on flanks and a stripe on each side of the groove; pleura generally yellowish beneath, more or less black laterally; wings fuscous, darker along costa and in marginal cell, second and third submarginals with subhyaline streaks; legs ferruginous, the four anterior coxæ, femora and tibiæ beneath more or less pale yellowish, all the coxæ more or less black above; abdomen of different shades of ferruginous, strongly golden sericeous, the three basal segments have frequently a more or less distinct narrow yellow apical margin, the base of second, third and fourth segments more or less broadly black sometimes obsolete so, sometimes only the second, or third, or fourth are so marked; ventral segments more or less marked with black at base, the intermediate segments sometimes banded with yellow. Length .75—.85 inch.

Six specimens. (Belfrage; Boll.) Allied to *rubiginosus*, from which it differs by the black vertex and mesothorax, paler wings and markings of abdomen, which are, however, extremely variable. This may prove to be only a ♂ variety of *rubiginosus*.

Polistes generosus, n. sp.

♂.—Head subsericeous; face long, dull luteous; anterior orbits, band above antennæ filling up emargination of eyes, and mandibles, yellowish-white or luteous; venter and occiput black; cheeks and a dot on each side behind ocelli, ferruginous; clypeus longer than wide, flat, sparsely and finely punctured, apex angular; ridge between antennæ prominent, subtuberculate above; antennæ long, black above, fulvous beneath, scape yellowish beneath; collar black, narrowly edged with fulvous above; prothorax fulvo-ferruginous, black laterally, upper margin narrowly edged with yellowish; mesothorax black, with two short ferruginous stripes on anterior middle; scutellum black with two ferruginous spots; postscutellum ferruginous, narrowly margined with black; metathorax transversely rather coarsely wrinkled above, with a broad shallow groove down the middle, black, a slender stripe on each side of groove and a spot on each flank, ferruginous; pleura black, a ferruginous spot beneath tegulæ and a luteous subangular mark behind anterior coxæ; tegulæ ferruginous, fuscous at base; wings yellowish-fuscous, darker along costa; legs fulvous, yellowish beneath, sericeous, four anterior coxæ above, posterior pair entirely and all the femora above, black; abdomen subsericeous, fulvo-ferruginous, a longitudinal mark on basal middle of first segment, basal margin of second segment, triangularly dilated above and suddenly dilated laterally, and narrow basal margin of third and fourth segments, black; apex of second and following segments stained more or less with fuscous; apical segment blackish, rugulose; venter black. Length .90 inch.

Three specimens. (Belfrage; Heiligbrodt.) This may be an extreme variety of *perplexus*.

Polistes texanus, n. sp.

♀.—Dull ferruginous, sericeous; head yellow, vertex, occiput and posterior margin of cheeks, ferruginous; clypeus subconvex, sparsely punctured, sometimes tinged with fulvous at base; antennæ entirely fulvo-ferruginous; narrow margins of prothorax, sometimes a band at base of scutellum, postscutellum more or less, two stripes on disk of metathorax, a spot or stripe on each side, a spot beneath tegulæ, a dot beneath posterior wing and the tegulæ more or less, yellow; metathorax with a shallow median groove, transversely striated; wings yellowish-fuscous, darker along costa; sometimes the mesothorax has two short discal lines; anterior coxæ beneath, line on outside of four posterior coxæ, four anterior femora beneath except base, tips of all the femora and outer side of all the tibiæ and base of tarsi, more or less yellow, tips of tarsi fuscous; abdomen strongly pale golden sericeous; rather broad apical margin of all the segments, except last, even on first segment and more or less strongly sinuate anteriorly on remaining segments, an angular mark on each side of first segment, sometimes reduced to a dot, and a spot on each side of remaining segments, larger on second, and sometimes nearly confluent with apical band, all yellow; all the apical bands are slightly interrupted or indented

medially by a slender ferruginous line; venter ferruginous more or less varied with yellowish; sometimes the yellowish markings on second and following segments are more or less obscure. Length .85 inch.

♂.—Closely resembles ♀; the face flat as usual, whitish-yellow, this color extending above antennæ and on line with emargination of eyes; clypeus flat; prothorax sometimes broadly yellowish laterally; mesothorax occasionally with two short discal yellow lines; the markings of abdomen vary considerably, being sometimes very distinct, with the apical bands broad and lemon-yellow and the lateral spots round and whitish, sometimes the apical bands are narrow and the lateral spots wanting except on second segment, sometimes the first segment has no lateral spot. Length .85 inch.

Eight specimens. (Belfrage; Boll; Heiligbrodt.)

Polistes bellicosus, n. sp.

♂ ♀.—Uniformly dull ferruginous, subsericeous; ♀ clypeus, sides of face, transverse line above antennæ, posterior orbits broader beneath and mandibles, yellow, clypeus subconvex, and sparsely punctured; ♂ clypeus, face as far up as and on a line with emargination of eyes, narrow posterior orbits broader beneath, and mandibles yellow, clypeus flat; antennæ of male long, pale beneath, dark above, scape yellowish beneath; margins of prothorax, basal margin of scutellum, postscutellum, two longitudinal lines on disk of metathorax, sometimes a lateral spot, spot beneath tegulæ, space between four anterior coxæ in ♂, tegulæ, line on outer side of all the coxæ of ♀, coxæ beneath of ♂, knees and four anterior tibiæ and tarsi beneath of ♀ and narrow apical margin of abdominal segments, more or less sinuate anteriorly and sometimes a spot on each side of first and second segments, all lemon-yellow; mesothorax generally with a fine central longitudinal black line; metathorax finely transversely wrinkled; wings fuscous, or fusco-hyaline, yellowish along costa, subviolaceous. Length .75 inch.

Seven specimens. (Belfrage.) Smaller, less robust and darker in color than *texana*, to which it is closely allied. The ornamentation of the abdomen is, however, very different.

Polistes variatus, n. sp.

♀.—Strongly sericeous, black; a transverse, subangular line above antennæ, posterior orbits, broader beneath, and mandibles except tips, yellow; clypeus subconvex, sparsely punctured, ferruginous, more or less broadly yellow at apex; cheeks sometimes ferruginous; antennæ ferruginous, black above; prothorax ferruginous, black on extreme lateral corner and narrowly margined anteriorly and posteriorly with yellow; mesothorax and pleura, except yellow spot beneath tegulæ, entirely black; scutellum and postscutellum ferruginous, margined at base with yellow; metathorax black, with four longitudinal yellow stripes, the lateral one sometimes slightly undulate, disk longitudinally sulcate and finely transversely wrinkled; tegulæ fulvous, margined with yellow; wings fusco-hyaline, darker and yellowish along costa; legs ferruginous, coxæ black, with yellow stripe on outside, knees, anterior femora and all the tibiæ and tarsi beneath, more or less yellow, tips of posterior tibiæ blackish within; abdomen strongly sericeous, fuscous or black, varied with dull ferruginous especially on second segment, apical margin of each segment, dilat-

laterally and slightly interrupted medially, and an irregular spot on each side, largest on second segment, yellow; beneath ornamented much as above. Length .75 inch.

♂.—Face and clypeus flat, as usual, and yellow as far up and on a line with emargination of eyes, cheeks beneath broadly yellow; antennæ long, yellowish beneath, apex curled and black; sides of prothorax, and pleura anteriorly and beneath pale yellow; thorax without any ferruginous color; scutellum sometimes with only a lateral yellow dot at base; lateral stripes of metathorax sometimes wanting; coxæ and all the legs beneath pale yellow, femora more or less black above; abdomen darker than in ♀, sides of second segment with a large ferruginous blotch enclosing a yellow spot, lateral margin of first segment yellow; disk of second, third and fourth ventral segments with a large triangular yellow mark, apical margins also yellow. Length .75 inch.

Six specimens. (Belfrage; Boll.)

Polistes americanus.

Vespa americana, Fabr. Ent. Syst. ii., p. 276.

Nine ♀ specimens. (Belfrage; Boll.)

Polistes minor.

Polistes minor, Beauv. Ins. p. 207, pl. 8, fig. 3.

Five ♀ specimens. (Belfrage; Boll.)

Polistes annularis.

Vespa annularis, Linn. Syst. Nat. ii., p. 950.

Ten ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Vespa sulphurea.

Vespa sulphurea, Sauss. Mon. Guêpes Soc. p. 137.

Five ♀ specimens. (Boll; Heiligbrodt.)

Vespa germanica.

Vespa germanica, Fabr. Ent. Syst. ii., p. 256.

Four ♂ specimens. (Boll.)

Vespa cuneata.

Vespa cuneata, Fabr. Syst. Piez. p. 258.

Three ♂ ♀ specimens. (Belfrage; Heiligbrodt.)

ANDRENIDÆ.

Colletes valida.

Colletes valida, Cress. Proc. Bost. Soc. Nat. Hist. xii., p. 165.

Three ♂ ♀ specimens. (Boll.)

Colletes inæqualis.

Colletes inæqualis, Say, Bost. Journ. Nat. Hist. i., p. 391.

Two ♀ specimens. (Belfrage; Boll.)

Colletes americana.

Colletes americana, Cress. Proc. Bost. Soc. Nat. Hist. xii., p. 167.

Three ♂ ♀ specimens. (Belfrage; Boll.)

Colletes texana, n. sp.

♀.—Robust, black, shining, head and thorax clothed with a short dense whitish cinereous pubescence, very sparse on clypeus, which is shining and sparsely punctured; thorax strongly, rather coarsely punctured, the pubescence on mesothorax and scutellum more sparse and mixed with black, basal edge of metathorax very coarsely reticulated; tegulæ pale piceous; wings short, hyaline; legs clothed with cinereous pubescence, longer on femora behind and dense on posterior legs; abdomen broad, convex, as long as head and thorax, shining, minutely punctured, base and sides of first segment with a white downy pubescence, apical margins of segments 1—5 with a narrow, even fascia of snow-white pubescence; apical segment small, obtusely pointed, clothed with short black pubescence. Length .35 inch.

One specimen from Comal Co. The abdominal fasciæ are very even and conspicuous.

Colletes consors.

Colletes consors, Cress. Proc. Bost. Soc. Nat. Hist. xii, p. 168.

One ♂ specimen. (Belfrage.)

Colletes albescens.

Colletes albescens, Cress. Proc. Bost. Soc. Nat. Hist. xii, p. 168.

Three ♀ specimens. (Belfrage.)

Prosopis affinis.

Prosopis affinis, Smith, Brit. Mus. Cat. i., p. 24.

One ♀ specimen. (Belfrage.)

Sphécodes texana, n. sp.

♀.—Black, shining, thinly clothed with a short cinereous pubescence, longer and more dense on cheeks, scutellum, metathorax and pleura; clypeus sparsely punctured, fringed anteriorly with long yellowish hairs, which cover the labrum; mandibles tinged with rufous; scape long and slender, flagellum brown beneath, paler towards apex; thorax very minutely and delicately punctured: basal space of metathorax finely granulated, becoming smooth on posterior edge; tegulæ honey-yellow; wings large, clear hyaline, subiridescent, nervures and stigma honey-yellow; legs slender, tibiæ and tarsi pale brownish, thickly clothed with pale yellowish hairs; abdomen large, smooth and polished, sides of three basal segments and apical segments entirely clothed with a short cinereous pubescence, bright honey-yellow, three apical segments dusky and sericeous. Length .35 inch.

♂.—Slender, more closely and densely punctured; apex of clypeus, labrum, and spot on mandibles white; antennæ longer, stouter, and scape much shorter than in ♀; knees, anterior tibiæ, base and apex of four posterior tibiæ and all the tarsi yellowish-white; abdomen more slender than in ♀, narrowed towards base, and less dusky at apex. Length .30 inch.

Four specimens. (Belfrage.)

Sphécodes dichroa.

Sphécodes dichroa, Smith, Brit. Mus. Cat. i. p. 37.

One ♀ specimen. (Belfrage.)

Sphceodes mandibularis, n. sp.

♀.—Black, shining, closely and finely punctured, thinly clothed with glittering whitish hairs, more dense on face, cheeks, scutellum and sides of thorax, and long on scutellum; mandibles ferruginous, tips black; antennæ short, stout, apex of flagellum pale testaceous beneath; mesothorax sparsely punctured; basal space of metathorax slightly excavated, coarsely rugose, the posterior edge subcarinate; basal sides of metathorax with a patch of white downy pubescence; tegulæ pale testaceous, darker at base; wings hyaline, subiridescent, nervures and stigma blackish; tibiæ and tarsi with rather dense glittering pubescence, tarsi pale; abdomen oblong-ovate, smooth and polished, bright rufo-ferruginous, base, sides and apex with a thin pale glittering pubescence, apex slightly dusky. Length .22 inch.

Two specimens. (Belfrage.)

Halictus occidentalis, n. sp.

♀.—Black, opaque, finely punctured; head not wider than thorax; face with rather dense pale ochraceous pubescence; clypeus shining, sparsely punctured, apex fringed with long golden hairs; mandibles reddish medially; cheeks with appressed whitish pubescence, fringed beneath with long yellowish hairs; vertex and occiput with short erect pale ochraceous pubescence; antennæ brownish beneath, pale at apex; mesothorax and scutellum with a finely impressed central longitudinal line, clothed with a very short pale pubescence; upper lateral margin of prothorax, patch before tegulæ, narrow lateral and posterior margins of metathorax, postscutellum, sides of metathorax and pleura clothed with dense ochraceous pubescence; base of metathorax finely subgranulated; tegulæ pale testaceous; wings yellowish, apical margin fuliginous; legs fulvous, with golden pubescence, coxæ, trochanters and base of femora more or less blackish; abdomen broader than thorax, oblong-ovate, very finely and closely punctured, shining towards apex, first segment clothed with erect pale pubescence, apical margins of segments 1—4 with an even fascia of dense white pubescence, and rima pale ochraceous. Length .55 inch.

♂.—Narrower than ♀; clypeus except two black spots at base, labrum and middle of mandibles pale yellow; antennæ long, pale fulvous beneath; sides of mesothorax and of metathorax and disk of first abdominal segment sometimes tinged with ferruginous; apex of wings but slightly dusky; knees, tibiæ and tarsi more or less tinged with yellow; abdomen narrower than in ♀ and more strongly punctured, anal segment more or less tinged with ferruginous or fulvous. Length .45 inch.

Four specimens. (Belfrage; Boll.)

Halictus armaticeps, n. sp.

♀.—Black, head and thorax rather thickly clothed with griseous pubescence; head slightly broader than thorax, very densely punctured, opaque; clypeus shining, very sparsely punctured, slightly depressed on anterior middle, apex fringed with long golden hairs; mandibles piceous; cheeks beneath with a subacute tubercle or spine on each side; antennæ short, flagellum brown beneath, paler at tips; thorax above closely punctured and thinly pubescent, scutellum flat, shining, sparsely punctured, postscutellum, sides of metathorax, sides of thorax in front of tegulæ and pleura densely pubescent; base of metathorax finely longitudinally rugose, sometimes almost striated; tegulæ rufo-

testaceous; wings hyaline, nervures honey-yellow; legs more or less tinged with brown and clothed with ochraceous pubescence; abdomen oblong-ovate, very finely and densely punctured, sericeous, base and sides of first segment and apex with griseous pubescence, apical margins of segment 1—4 with a narrow even fascia of short dense whitish pubescence, anal rima pale ochraceous. Length .30—.35 inch.

Eight specimens. (Belfrage; Boll.) The stout tubercle or spine on each side of head beneath, found also in ♀ of *texanus*, varies considerably in length and acuteness, being sometimes long and acute, sometimes short and blunt.

Halictus texanus, n. sp.

♀.—Black, very closely and finely punctured; head not wider than thorax, clothed with a short cinereous pubescence, more dense on face and cheeks and long and thin on cheeks beneath; clypeus and middle of face shining, very sparsely punctured, the former fringed at apex with long golden hairs; mandibles tinged with red; cheeks beneath with a stout obtuse tubercle; antennæ short, brown, flagellum pale beneath; prothorax tinged with ferruginous; upper lateral margin of prothorax, anterior margin of mesothorax, post-scutellum, sides of metathorax and of pleura clothed with dense griseous pubescence; metathorax and pleura except a blotch beneath wings, pale ferruginous; base of metathorax finely granulated; tegulæ honey-yellow; wings hyaline, faintly dusky at tips, nervures and stigma honey-yellow; legs pale ferruginous or fulvous, with pale yellow pubescence, four anterior femora more or less black; abdomen oblong-ovate, densely and minutely punctured, sericeous, segments 1—4 each with an apical fascia of white pubescence, anal rima cinereous, first, second and basal margin of third segments pale fulvo-ferruginous. Length .30 inch.

♂.—Smaller, narrower than ♀, more densely pubescent, that on sides of face dense and silvery-white; clypeus except base, labrum and middle of mandibles lemon-yellow; cheeks unarmed; antennæ long, flagellum yellow with a brown streak above not reaching apex, apex of scape beneath pale; sides of metathorax above and nearly the whole of pleura black; knees, tibiæ and tarsi more or less lemon-yellow; abdomen more convex than in ♀, narrower, more thickly pubescent, two basal segments strongly tinged with fulvous. Length .25 inch.

Two specimens. (Coll. G. W. Belfrage.)

Halictus similis.

Halictus similis, Smith, Brit. Mus. Cat. i., p. 69.

Six ♀ specimens. (Belfrage.)

Halictus bardus, n. sp.

♀.—Deep black, closely punctured, head and thorax rather thickly clothed with a griseous pubescence; head not wider than thorax; middle of face and clypeus shining, sparsely punctured, the punctures on clypeus large, apex fringed with long golden hairs; antennæ entirely black; scutellum smooth and shining, sparsely punctured; base of metathorax finely irregularly longitudinally wrinkled; on postscutellum, sides of metathorax and pleura the

pubescence is long; tegulæ piceous-black; wings hyaline, apical third faintly dusky, nervures and stigma fuscous; legs blackish with griseous pubescence, changing to pale yellow in certain lights; abdomen smooth and shining, very minutely punctured, base of first segment and extreme sides of all the segments with pale pubescence, which is also thinly scattered over apical segments, basal margin of segments 2-4 with a narrow fascia of short dense white pile, anal rima brown. Length .35 inch.

Two specimens. (Belfrage.) Closely allied to *similis*, but the punctures on head and thorax are more dense, the pubescence paler, the base of metathorax more finely sculptured, the tegulæ black, the wing nervures fuscous, the pubescence of legs paler and the abdomen less shining and more closely and finely punctured.

***Haliectus ornatipes*, n. sp.**

♂.—Narrow, black, closely and finely punctured, thickly clothed with griseous pubescence; sides of face and base of clypeus with short dense white pubescence; clypeus produced, lemon-yellow, base black; labrum and mandibles except tips also lemon-yellow; cheeks with long white pubescence; flagellum yellow-testaceous beneath; scutellum smooth and shining, sparsely punctured; base of metathorax finely rugulose, sides closely punctured; tegulæ pale yellow, with a dusky pupil; wings hyaline, subiridescent, nervures and stigma honey-yellow; legs black with white pubescence, knees, tibiæ, except elongate blackish spot on each side, and tarsi lemon-yellow; abdomen elongate, subconvex, with scattered pale pubescence, apical margin of all the segments with a fascia of whitish pubescence more dense laterally, apical margins of all the segments narrowly dull rufo-testaceous. Length .30-.35 inch.

Four specimens. (Belfrage; Boll.) This may prove to be the ♂ of *armaticeps*.

***Haliectus impurus*, n. sp.**

♀.—Blue-green, shining, clothed with a short erect or suberect pale pubescence, very dense on the face; head densely and finely punctured; clypeus squarely produced at tip, which is margined with testaceous; labrum, tips of mandibles and flagellum beneath also testaceous; mesothorax and scutellum smooth and polished; metathorax rugose, the basal space with radiating striæ; tegulæ and tubercles testaceous; wings hyaline, iridescent, nervures fuscous, stigma paler; legs shining black, with pale pubescence, knees, tibiæ and tarsi pale testaceous, tibiæ with a dusky mark on outer middle; abdomen elongate, convex, smooth and shining, with a short thin pale pubescence, rufo-testaceous, more or less blackish at base and apex; venter paler than above. Length .32 inch.

Two specimens. (Belfrage.)

***Haliectus lusorius*, n. sp.**

♀.—Black; head and thorax closely and finely punctured, thinly clothed with a griseous pubescence; head small; clypeus produced, shining, with large scattered punctures, apex fringed with long yellowish hairs; mandibles rufo-piceous at tips; mesothorax with a well-impressed central line; base of metathorax finely longitudinally rugose; tegulæ dull testaceous; wings long,

ample, yellowish-hyaline, nervures and stigma pale honey-yellow; legs brown-black, with pale hairs; abdomen ovate, smooth and polished, impunctured, base, sides and apex with pale pubescence, apical margins of the segments broadly testaceous, anal rima pale fulvous. Length .30 inch.

Two specimen. (Belfrage.) Easily distinguished by the broad testaceous apical margin of abdominal segments.

***Haliectus connexus*, n. sp.**

♀.—Robust, head and thorax dark green, thinly clothed with short pale pubescence; head broad, closely and minutely punctured, more sparsely so on face and clypeus, apex of latter purplish-black and fringed with long yellowish hairs; mandibles sometimes rufo-piceous; flagellum pale brown towards apex; thorax very finely not closely punctured, the mesothorax with the central longitudinal line generally deeply impressed anteriorly; scutellum sparsely punctured, faintly impressed centrally; base of metathorax with more or less irregular radiating elevated lines generally not reaching posterior margin of the enclosure; pubescence on postscutellum, sides of metathorax and pleura long; tegulæ pale honey-yellow; wings clear hyaline, iridescent, nervures and stigma very pale; legs brown, black at base, clothed with pale pubescence; abdomen ovate, convex, black, smoothed and polished, imperceptibly punctured, sides of first and second and the remaining segments clothed with a short pale pubescence, becoming more dense at apex, apical margin of the segments narrowly testaceous. Length .23—.27 inch.

Seventeen specimens. (Belfrage.) The thorax is very finely and sparsely punctured, differing in that respect from the other species.

***Haliectus disparilis*, n. sp.**

♀.—Head and thorax brassy-green, thinly clothed with a pale pubescence; head not broad, densely punctured; clypeus sparsely punctured, apex purplish-black and fringed with long pale ochraceous pubescence; mandibles more or less tinged with ferruginous; flagellum more or less pale beneath towards apex; pubescence of thorax above erect and slightly tinged with ochraceous; mesothorax sparsely punctured, with a central and lateral impressed longitudinal lines; scutellum finely and densely punctured on the disk; base of metathorax more or less distinctly rugulose, with irregular radiating elevated lines, sometimes quite obsolete; tegulæ testaceous; wings hyaline, iridescent, nervures pale fuscous or pale testaceous; legs brown-black, with pale pubescence, tarsi more or less pale; abdomen short ovate, convex, smooth and shining, impunctured, black, with an æneous tinge or reflection, base, sides and apex clothed with a short whitish pubescence, thinly scattered over disk of the segments except first and second which are nude and polished, apical margin of the segments subtestaceous. Length .20—.25 inch.

Eight specimens. (Belfrage.) This is allied to *connexus*, but differs by the brassy-green color of head and thorax, by the more dense pubescence, which is tinged with ochraceous or yellow on vertex and thorax above, and by the narrower head.

***Halictus coactus*, n. sp.**

♀.—Green, abdomen dark æneous, clothed with a short pale pubescence; head very densely and finely punctured; clypeus slightly produced, with large sparse punctures, apex broadly purplish and fringed with long yellow hairs; flagellum pale brown beneath, especially at tips; mandibles tipped with ferruginous; thorax much less closely punctured than the head; base of metathorax finely, somewhat longitudinally, rugose; tegulæ brown; wings hyaline, iridescent, nervures and stigma pale honey-yellow; legs brown-black, clothed with pale pubescence; abdomen ovate, convex, very minutely punctured, sides and apex thickly clothed with short pale pubescence, apical margin of first and second segments deeply impressed or constricted, especially that of first segment. Length .20 inch.

Four specimens. (Belgrave.) Easily recognized by the constricted segments of abdomen.

***Halictus stultus*, n. sp.**

♀.—Small, head and thorax dull dark green, sometimes tinged with brassy, thinly clothed with a short griseous pubescence; head not broader than thorax, closely and minutely punctured, face broad, clypeus short, sparsely punctured, purplish-black towards apex which is fringed with long pale yellowish hairs; mandibles piceous, sometimes tinged with rufous; antennæ short, black, flagellum more or less pale beneath towards apex; mesothorax very minutely and sparsely punctured, sometimes almost imperceptibly so, a deeply impressed central longitudinal line; scutellum slightly impressed centrally; base of metathorax with radiating elevated lines which are sometimes more or less abbreviated; on postscutellum, sides of metathorax and pleura the pubescence is longer than elsewhere; tegulæ testaceous; wings hyaline, iridescent, nervures and stigma pale testaceous; legs pale brown or fuscous, blackish at base, clothed with pale pubescence, anterior knees and all the tarsi rufo-testaceous; abdomen smooth and shining, impunctured, more or less thickly pubescent towards apex, the base and sides thinly pubescent, color variable, being sometimes entirely brown-black, sometimes fuscous with the segments testaceous at apex, sometimes more or less testaceous at base, shading into brown or fuscous at apex, sometimes entirely testaceous or dull honey-yellow. Length .16—20 inch.

Ten specimens. (Belgrave.)

***Halictus albitarsis*, n. sp.**

♂.—Dark bronzed-green, sometimes slightly brassy, clothed with a whitish pubescence; head not broader than thorax, densely and finely punctured, sides of face and clypeus densely clothed with an appressed silvery-white pile; mandibles piceous; antennæ long, black above, brown or pale fuscous beneath; mesothorax and scutellum with sparse minute punctures and generally with a distinct impressed longitudinal line on disk and over tegulæ; pubescence of thorax above erect, longer on postscutellum, sides of metathorax and pleura; metathorax generally tinged with blue, the base more or less longitudinally rugose, sometimes with well-defined and distinct radiating elevated lines or wrinkles; sides of metathorax and pleura finely roughened; tegulæ testaceous, sometime dull; wings hyaline, iridescent, nervures and stigma pale testaceous; legs black or piceous, shining, clothed with pale pubes-

cence, knees, tips of tibiæ and tarsi pale yellow or whitish; abdomen elongate, sometimes slightly clavate, convex, shining, less green than head and thorax, sides of three basal segments and the apical segments clothed with a short thin pale pubescence, longer at apex, the second and third segments slightly constricted at base, apical margin of the segments sometimes substestaceous. Length .15—.25 inch.

Twenty-six specimens. (Belfrage; Boll.) Easily recognized by the pale tarsi.

Angochlora lucidula.

Angochlora lucidula, Smith, Brit. Mus. Cat. i., p. 81.

Two ♂ ♀ specimens. (Belfrage.)

Angochlora sumptuosa.

Angochlora sumptuosa, Smith, Brit. Mus. Cat. i., p. 82.

Four ♀ specimens. (Boll.)

Angochlora pura.

Halictus pura, Say, Bost. Journ. Nat. Hist. i., p. 395.

Ten ♂ ♀ specimens. (Belfrage; Heiligbrodt.)

Agapostemon tricolor.

Halictus tricolor, St. Farg. Hym. ii., p. 289.

Six ♂ specimens. (Belfrage; Boll; Heiligbrodt.)

Agapostemon æruginosus.

Agapostemon æruginosus, Smith, Brit. Mus. Cat. i., p. 86.

One ♀ specimen. (Heiligbrodt.)

Agapostemon texanus, n. sp.

♀.—Bright green, tinged with blue in certain lights, clothed with a pale ochraceous pubescence; head finely, very densely punctured, strongly tinged with blue, middle of face transversely wrinkled; clypeus rather sparsely punctured, apex purplish-black; labrum with dense pale ochraceous hairs; mandibles pale yellow, piceous at tips; flagellum pale brown beneath; mesothorax more or less tinged with golden, extremely minutely and closely punctured, interspersed with larger sparse punctures; scutellum sparsely punctured, base of metathorax longitudinally wrinkled, the enclosed base with radiating wrinkles, the surrounding carina sharply defined, the flanks strongly tinged with blue; pleura densely, rather coarsely and confluent punctured; tegulæ pale testaceous, with a yellow spot anteriorly; wings hyaline, faintly dusky at apex, nervures and stigma pale honey-yellow; legs brown-black, clothed with ochraceous pubescence, four anterior knees yellowish; abdomen green, changing in certain lights, densely and finely punctured, clothed with a very short fine pale sericeous pile, base and sides of the first, the two or three apical and sides of intermediate segments, clothed with tolerably long pale pubescence, the apical segment clothed with a dense black pubescence, apex of the segments depressed, the disk with a more or less obvious bluish or purplish band. Length .40—.45 inch.

Six specimens. (Belfrage; Boll) Allied to *æruginosus*, Smith;

which is, however, more golden and less blue, with the mesothorax uniformly punctured; the abdomen is much alike in both species.

Nomia Nortoni.

Nomia Nortoni, Cress. Trans. Am. Ent. Soc. i., p. 355.

Eight ♂ ♀ specimens. (Belfrage; Boll.)

Nomia? heteropoda.

Nomia heteropoda, Say, Long's 2d Exped. ii., p. 349.

Three ♂ ♀ specimens. (Boll.)

Andrena reflexa, n. sp.

♂.—Broad, robust, black, shining; head slightly broader than thorax, face broad, clypeus dull yellowish-white; face, clypeus, labrum, occiput and cheeks thickly clothed with a long fulvo-ochraceous or pale ochraceous pubescence; vertex sparsely and finely punctured, naked, smooth and polished; mandibles long, piceous or black, antennæ brown-black, flagellum rufo-testaceous beneath; thorax clothed with a rather long, dense fulvous or pale ochraceous pubescence, paler on metathorax and pleura; tegulæ testaceous; wings subhyaline, apex pale fuliginous, with a slight violaceous reflection; legs fuscous, with pale yellowish or ochraceous pubescence, tarsi fulvous; abdomen short, broad ovate, finely and closely punctured, thinly clothed with a fulvo-ochraceous or pale ochraceous pubescence, apical margin of the segments much depressed, broadly pale testaceous and thickly fringed with pale pubescence, the extreme apical edge of the three or four basal segments more or less strongly reflexed, sides of the segments and apex more thickly pubescent. Length .45 inch.

Three specimens. (Belfrage.) One specimen differs only in the head being much larger, and may prove to be a distinct species.

Andrena Belfragei, n. sp.

♀.—Black, shining; head not broader than thorax, face, occiput and cheeks clothed with long, rather dense fulvous pubescence, clypeus with a short fulvous pubescence, large, closely punctured with a smooth median longitudinal impressed line; antennæ short, flagellum brown beneath towards apex; mesothorax, scutellum and space beneath tegulæ clothed with a dense deep fulvous pubescence, that on metathorax long and ochraceous, that on pleura pale ochraceous; tegulæ rufo-piceous; wings yellowish-hyaline, apex rather broadly fuscous, subviolaceous; legs brown-black, with pale pubescence, tarsi brown, the pubescence on tibiæ and tarsi dense and pale yellowish; abdomen broad, depressed, oblong-ovate, shining, first segment sparsely and finely punctured, polished, thinly clothed at base and sides with pale pubescence, remaining segments densely punctured with apical margin depressed, smooth and polished, sides of second, third and fourth segments, and apical margin of fourth segment with a thin pale pubescence, anal fimbria fulvous. Length .55 inch.

One specimen. (Coll. G. W. Belfrage.) A very pretty species, the pubescence of thorax above being deep fulvous, or somewhat of a saffron color, and the abdomen shining and almost entirely naked above, except apex which is fulvous.

***Andrena permitis*, n. sp.**

♀.—Black; head as wide as thorax, sides of face and of clypeus, occiput and cheeks clothed with long, rather dense, pale yellowish pubescence; clypeus closely punctured, with a smooth central line; mandibles piceous or rufo-piceous; flagellum brown beneath, pale towards apex; thorax clothed with a long dense bright lemon-yellow pubescence, paler on metathorax and pleura; tegulæ testaceous; wings subhyaline, apical margin fuliginous; legs brown-black or brown, with pale yellowish pubescence, tibiæ and tarsi pale brown; abdomen densely punctured, apical margin of the segments pale testaceous, having a band of dense pale ochraceous pubescence, sides of first segment with long ochraceous pubescence, anal fimbria tinged with fulvous; ventral segments fringed at apex with long pale pubescence. Length .52 inch.

Four specimens. (Belfrage.)

***Andrena melliventris*, n. sp.**

♀.—Black; head as broad as thorax, sides of face, occiput and cheeks clothed with rather dense yellowish pubescence; clypeus large, closely punctured, shining, yellowish-testaceous, thinly pubescent, with two long yellowish setæ on apical middle; mandibles piceous; flagellum brownish beneath; thorax above clothed with a very dense, short, bright fulvous pubescence, which on metathorax and pleura is long and paler; tegulæ testaceous; wings yellowish-hyaline, apical margin dusky; legs black, tinged with brown, clothed with pale yellowish pubescence, which on four posterior tibiæ and tarsi is fuscous, changing to yellowish in certain lights; abdomen elongate ovate, flattened, opaque, minutely, not closely punctured, clothed with a very short yellowish pubescence more dense on sides of the segments, first segment with a long thin yellowish pubescence at base and sides, and with two testaceous spots on the disk, apical margin of the segments yellowish testaceous and fringed with short dense ochraceous pubescence, anal fimbria ochraceous; venter honey-yellow, stained with fuscous on apical third, the segments clothed with long yellowish pubescence towards apex. Length .55 inch.

One specimen. (Coll. G. W. Belfrage.) A pretty and distinct species.

***Andrena verecunda*, n. sp.**

♀.—Black; head and thorax clothed with a dense, rather long, cinereous pubescence; head not wider than thorax, pubescence on clypeus short; antennæ short, flagellum brown beneath towards apex; tegulæ piceous; wings hyaline, apical margin dusky, nervures fuscous; legs black, more or less tinged with brown, with pale or cinereous pubescence, tarsi brown; abdomen oblong-ovate, shining, sparsely and minutely punctured, thinly clothed with a short cinereous pubescence, first segment, extreme sides and depressed apical margin of segments 2—4 and the anal fimbria, of rather dense cinereous pubescence; venter more or less tinged with rufo-testaceous, the segments fringed with cinereous pubescence. Length .45—.50 inch.

Two specimens. (Belfrage.)

***Andrena imitatrix*, n. sp.**

♀.—Black; head not broader than thorax, sides of face and of clypeus, occiput and cheeks with long rather dense cinereous pubescence; flagellum brown beneath towards apex; thorax above sparsely punctured, clothed with a rather dense cinereous pubescence, slightly tinged with ochraceous; sides of metathorax and pleura with long cinereous pubescence; base of metathorax more or less coarsely reticulated; tegulæ piceous; wings hyaline, faintly tinged with yellowish; legs black, with cinereous pubescence, tarsi brown; abdomen oblong-ovate, depressed, shining black, closely and finely punctured, first segment polished, base, sides and lateral apical margin with cinereous pubescence, apical margin of segments 2—4 depressed and with a fascia of dense white pubescence, anal fimbria whitish, sometimes tinged with ochraceous; ventral segments fringed at apex with long pale pubescence. Length .40 inch.

Three specimens. (Belgrave.) Rather smaller than *verecunda*, with the pubescence of head and thorax less dense and the abdomen less pubescent and with the fasciæ conspicuous and white.

***Andrena hirticeps*.**

Andrena hirticeps, Smith, Brit. Mus. Cat. i. p. 116.

Four ♂ specimens. (Belgrave.)

***Andrena bruniventris*, n. sp.**

♂.—Black, head and thorax thickly clothed with a long pale ochraceous pubescence, very dense and paler on clypeus; head broader than thorax, face broad; mandibles long, piceous, reddish towards tips; flagellum brownish beneath; pubescence on thorax above, especially on scutellum tinged with yellowish; tegulæ dull testaceous; wings pale yellowish-hyaline, apex pale fuscous; legs blackish, tinged with brown, clothed with ochraceous pubescence, tarsi rufo-testaceous; abdomen ovate, convex, shining, chocolate-brown, clothed with a short scattered pale pubescence, which is dense and ochraceous at apex. Length .43 inch.

One specimen. (Coll. G. W. Belgrave.) Differs from *hirticeps* principally by the color of the abdomen.

***Andrena texana*, n. sp.**

♂.—Black; head as wide as thorax; face, clypeus, occiput, cheeks, thorax, legs and basal segment of the abdomen clothed with a long, more or less dense yellow ochreous pubescence; antennæ long, flagellum brown beneath; base of metathorax rugulose; tegulæ pale piceous; wings hyaline, apex broadly dusky, second submarginal cell narrower than usual; legs piceous, tibiæ and tarsi brown, the latter pale brown; abdomen oblong-ovate, shining, minutely not closely punctured, clothed with a very short dense dull yellowish pubescence, apical margin of the segments subtestaceous and with a band of short dense yellow ochreous pubescence, apex with dense ochraceous pubescence; venter fusco-testaceous, the segments fringed at apex with ochreous pubescence. Length .40 inch.

Ten specimens. (Belgrave.) A very distinct little species, with the pubescence quite dense and of a uniform yellow ochreous color.

***Andrena miserabilis*, n. sp.**

♀.—Black; head not broader than thorax; face, occiput and cheeks clothed with long yellow ochreous pubescence; clypeus large, shining, almost naked, sparsely punctured, disk impunctured; flagellum brown beneath; thorax thickly clothed with a long yellow ochreous pubescence, not quite hiding the surface of mesothorax and scutellum; tegulæ dull testaceous; wings yellowish-hyaline, iridescent, faintly dusky at tips, nervures and stigma honey-yellow; legs black or piceous, clothed with ochraceous pubescence, tarsi paler; abdomen oblong-ovate, depressed, shining, extremely minutely punctured, base and sides of first segment, apical margin of all the segments clothed with an ochraceous pubescence, anal fimbria of same color. Length .32 inch.

♂.—Smaller, more slender; clypeus with a long dense pale ochraceous pubescence, that on head and thorax longer than in ♀; antennæ long; base of metathorax coarsely reticulated; anterior tarsi rufo-testaceous, four posterior tarsi pale honey-yellow, and sometimes also the posterior tibiæ; abdomen more convex than in ♀. Length .30 inch.

Eight specimens. (Belfrage.)

***Andrena bipunctata*, n. sp.**

♂.—Black; head slightly broader than thorax, face, occiput and cheeks with long griseous pubescence; clypeus broad, whitish, smooth and shining, with a small black spot on each side, apex fringed with long pale pubescence; mandibles piceous at tips; flagellum testaceous beneath; thorax clothed with a long, not dense, griseous pubescence; base of metathorax with a few short radiating elevated lines; tegulæ piceous; wings hyaline, iridescent, faintly dusky at apex, nervures and stigma honey-yellow; legs black or piceous, with pale pubescence, tarsi subttestaceous at apex; abdomen elongate, shining, with a short scattered pale pubescence, apical margin of the segments narrowly pale testaceous, apex with long pale pubescence. Length .35 inch.

Two specimens. (Belfrage.) Easily recognized by the broad white clypeus with two conspicuous black dots.

APIDÆ.

***Panurgus æthiops*, n. sp.**

♀.—Robust, deep black; head not broader than thorax, closely and coarsely punctured, finer and more dense on face and clypeus, which have a scattered yellowish pubescence, as well as cheeks and posterior margin of head; clypeus not produced; mandibles piceous; antennæ short, black; mesothorax shining, with large sparse punctures, those on scutellum and pleura closer and coarser, those on postscutellum dense and confluent; mesothorax deeply impressed on anterior middle; metathorax rounded very densely and rather finely punctured, basal depressed margin narrow, with short crenulated striæ, behind which on each side is a smooth shining space; tegulæ dull testaceous; wings uniformly dark fuliginous, with subhyaline blotches at tip of second submarginal cell and beneath; legs black, tibiæ and tarsi brownish, the latter paler, densely clothed with yellow pubescence, long on posterior pair, extreme base of four anterior tibiæ with a pale yellow spot; abdomen broad ovate, depressed, closely and finely punctured, apical margin of the segments

rather broadly smooth and polished, narrowed laterally, extreme sides of segments 2-4, apex of fifth segment and the apical segment except disk, with dense ochraceous pubescence, otherwise the abdomen above is naked, disk of apical segment triangular, base of first segment deeply indented centrally; ventral segments with an apical band of long erect ochraceous pubescence. Length .45 inch.

♂.—Narrower than ♀; face not quite up to antennæ, clypeus, scape beneath, knees, tibiæ and tarsi, all lemon-yellow; the pubescence on legs short and sparse; abdomen narrow, convex, the segments slightly constricted at base, extreme apex of abdomen with short, dense pale ochraceous pubescence; venter fuscous, with short pale ochraceous pubescence at apex of segments. Length .40 inch.

Ten specimens. (Belgrave.)

Panurgus albitarsis, n. sp.

♀.—Black, shining, sparsely punctured, clothed with griseous pubescence, which is long on vertex, cheeks, postscutellum and pleura; clypeus with large scattered punctures; labrum with golden hairs; antennæ short, brownish at tips; sides of metathorax finely and densely punctured, basal enclosed longitudinally striated; tegulæ testaceous; wings hyaline, iridescent, nervures and stigma testaceous, marginal cell truncate at tip; legs brown-black, with pale pubescence, four anterior tarsi pale brown with pale yellowish pubescence, posterior pair dull white or yellow, posterior tibiæ with a floccus of long whitish pubescence; abdomen oblong-ovate, flattened, shining, finely punctured, the apical margins broad, smooth and polished, piceous, tinged with dull testaceous at apex, sides of second and third segments and apex of remaining segments clothed with long pale pubescence, extreme apex with short, dense pale ochraceous pubescence; ventral segments with a band of erect pale pubescence. Length .28 inch.

♂.—Narrower than ♀ and more closely punctured; sides of face and clypeus lemon-yellow; knees, line on anterior tibiæ in front and all the tarsi yellowish-white; abdomen narrower, second and third segments slightly constricted at base. Length .25 inch.

Four specimens. (Belgrave.)

Panurgus ornatipes, n. sp.

♂.—Black, closely and finely punctured; head and thorax clothed with a short dense pale pubescence, tinged with brownish on mesothorax; face, clypeus, labrum, mandibles except tips, and scape beneath more or less, lemon-yellow; flagellum brownish beneath; mesothorax closely punctured, the pubescence short, erect and dense; metathorax sparsely pubescent, closely and finely punctured, narrow basal enclosure crenulated, behind which is a narrow smooth space; tubercles lemon-yellow; tegulæ brown testaceous; wings hyaline, iridescent, apical margin dusky, marginal cell truncate at tip; legs black with pale pubescence, knees, tibiæ and tarsi lemon-yellow, an elongate central black spot on each side of the tibiæ; abdomen elongate, closely and finely punctured, apical margin of the segments broadly depressed, smooth and polished, subttestaceous at apex, sides of three basal segments, and the remaining segments clothed with pale pubescence, tinged with yellowish on apical

segments, all the segments have at base a very short brownish-sericeous pile, more obvious in perfectly fresh specimens; first segment deeply notched at base, the second and third segments slightly depressed at base. Length .25 inch.

Four specimens. (Belfrage.)

Panurgus picipes, n. sp.

♂.—Deep black, with large sparse punctures and clothed rather thickly with a short griseous pubescence; sides of face and clypeus lemon-yellow; mesothorax with a well-impressed central line; metathorax sculptured as in *ornatipes*; tubercles black; tegulæ brown, paler on outer margins; wings hyaline, iridescent, very faintly dusky at apex, marginal cell truncate at tip; legs piceous, with pale pubescence, knees and tarsi brownish-testaceous; abdomen as in *ornatipes*, except that there is no brown sericeous pile and the depressed polished apical margin of the segments are piceous, the second, third and fourth segments are constricted at base, the pubescence pale. Length .26 inch.

Two specimens. (Belfrage.)

Perdita? albipennis.

Perdita? albipennis, Cress. Trans. Am. Ent. Soc. ii., p. 386.

One specimen. (Belfrage.)

Osmia lignaria.

Osmia lignaria, Say, Bost. Journ. Nat. Hist. i., p. 399.

Three specimens. (Boll.)

Osmia chalybea.

Osmia chalybea, Smith, Brit. Mus. Cat. i., p. 143.

One ♀ specimen. (Belfrage.)

Osmia texana, n. sp.

♂.—Dark green or blue-green, head and thorax densely and strongly punctured, clothed with pale pubescence; head rather large, subquadrate, face, clypeus, occiput and cheeks clothed with long pale pubescence, very dense on clypeus; thorax thinly clothed with a long pale pubescence; scutellum sparsely punctured; tegulæ piceous; wings subhyaline, dusky at apex, upper half of marginal cell fuliginous; legs black, punctured, clothed with pale pubescence; abdomen dark green, shining, rather closely, finely punctured, clothed with a short scattered pale glittering pubescence, long and more dense on basal segment, apical margin of sixth segment reflexed and subsinuate medially, apical segment bidentate at apex. Length .40 inch.

Two specimens. (Belfrage.)

Osmia subfasciata, n. sp.

♀.—Dark blue, closely and strongly punctured; head large, subquadrate sides of face and cheeks clothed with long pale pubescence, apex of clypeus and mandibles with short ochraceous pubescence; thorax above thinly clothed with a short, pale pubescence, that on metathorax and pleura longer and more dense; tegulæ piceous; wings subhyaline, pale fuscous at apex and in marginal cell; legs black, clothed with pale pubescence; abdomen convex, the three basal segments more finely and less closely punctured than thorax, the

apical segments coarsely punctured and thickly pubescent, apical margin of the segments fringed with a short pale pubescence more or less interrupted medially; ventral scopa pale ochraceous. Length .35 inch.

♂.—Smaller; head smaller, the face and clypeus more densely pubescent, antennæ longer, apical bands of abdomen less obvious, and the apical segment bidentate. Length .30 inch.

Three specimens. (Belfrage.)

Megachile fortis, n. sp.

♂.—Black, opaque, densely clothed with a pale yellowish pubescence; face with long, dense yellowish-white pubescence, that on vertex and cheeks thin, that on cheeks beneath short, dense and white; head broad, densely and finely punctured; antennæ entirely black, with apical joint compressed and dilated; pubescence of thorax nearly hiding the surface, that on metathorax long, less dense and paler in color; tegulæ rufo-piceous; wings fusco-hyaline, faintly tinged with violaceous; legs black, with a short yellowish pubescence, each anterior coxa with a long black spine, their femora honey-yellow with a blackish stripe behind where the pubescence is dense and pale yellowish, their tibiæ tinged with honey-yellow within, densely pubescent on outside, the pubescence golden-yellow at tip, their tarsi broadly dilated and fringed posteriorly with dense long yellow pubescence, mixed with brown within, that on upper surface snow-white, first joint nearly as long as tibiæ, of equal width, concave within, and with a line of snow-white pubescence, the anterior edge sharply carinate and blackish, fringed with short dense brown pubescence, second joint as broad as first joint and about one-fourth as long, slightly narrowed towards apex, fringed like preceding joint, third and fourth joints gradually smaller, apical joint as long as two preceding combined, honey-yellow, claws cleft, black at tip; four posterior legs formed alike, the tarsi flat, not much dilated, and fringed with long yellowish pubescence, joints of intermediate tarsi more deeply lobed at apex than those of posterior pair; abdomen about as long as head and thorax, subquadrate, as broad as thorax, densely and finely punctured, first segment deeply and broadly excavated at base, the sides with long yellowish pubescence, apical margin of each segment except last, fringed with a short dense yellowish pubescence, apical segment subtruncate above, not emarginate, beneath tridentate, the lateral teeth rounded, the central one subacute. Length .60 inch.

Two specimens. (Belfrage.) More robust than *femorata*, Smith, the pubescence less dense and paler, the head larger, the apex of antennæ dilated, the anterior legs differently formed and the apex of abdomen not emarginate.

Megachile comata, n. sp.

♂.—Same form as *fortis*, with the pubescence paler, being of a very pale yellowish-white with a faint greenish tinge, except on face where it is pale yellowish-white as in *fortis*; on the cheeks beneath there is a patch of dense snow-white pubescence, and on upper part of cheeks a thin white sericeous pile; apex of antennæ pointed, not dilated; wings hyaline with apical margin pale fuliginous; anterior coxæ each with a long black spine, their femora honey-yellow, with the posterior apical margin black and fringed with a dense

snow-white pubescence, slightly mixed with brownish within, on inner side are two slender oblique blackish streaks, apical margin black, their tibiæ honey-yellow, blackish at base on outer side where the pubescence is pale golden, on the anterior apex there is a small tuft of blackish pubescence and on posterior apex beneath a tuft of long snow-white pubescence, their tarsi pale yellowish-white, with much the exterior appearance of those of *fortis*, with the posterior fringe paler, and black at extreme base beneath, the first joint more convex outwardly and very deeply and longitudinally excavated or hollowed out beneath, the edge fringed with dense blackish pubescence, except on apical anterior edge, second joint rather narrower than first and less than one-fifth in length, third and fourth joints gradually less dilated, claws black at tips; intermediate coxæ each with a black acute spine shorter than those on anterior pair, their femora much swollen, their tibiæ fulvous anteriorly, their tarsi simple and densely clothed with whitish pubescence, posterior legs with pale pubescence, tips of their tibiæ reddish, their tarsi with fulvous pubescence beneath; abdomen shaped as in *fortis*, the pubescence pale greenish-yellow, whitish when viewed laterally, the short, dense apical fringe on second to fifth segments whitish, apex deeply notched centrally, with two or three indentations on each side, beneath the edge is bisinuate on each side; venter with long pale pubescence. Length .55 inch.

One specimen. (Coll. G. W. Belfrage.)

Megachile xylocopoides.

Megachile xylocopoides, Smith, Brit. Mus. Cat. i., p. 189.

One ♂ specimen. (Belfrage.)

Megachile albitarsis, n. sp.

♂.—Black, very densely and minutely punctured; head large, rather broader than thorax, clothed with pale yellow pubescence, very dense and lemon-yellow on face as far up as ocelli, paler on clypeus, on the cheeks it is short and white, very dense beneath, flagellum slightly tinged with brown, apical joint compressed and dilated; thorax with whitish pubescence, dense on pleura and long on sides of metathorax; two spots on mesothorax anteriorly, one behind each tegulæ, and a sutural line before scutellum, of dense pale pubescence; tegulæ dull testaceous on outer half; wings yellowish-fusco-hyaline, dusky on apical margin; anterior legs pale fulvous, their coxæ and trochanters behind black, the former each with a long subacute black spine, their femora behind with long white pubescence, posterior apical margin and two short stripes at apex within black, their tibiæ with short pale golden pubescence, lower edge fringed with long pale pubescence, inner apical margin black, their tarsi dilated, pale yellowish-white, fringed posteriorly with long dense whitish pubescence tipped with black within, first joint as long as tibiæ, dilated at anterior apex, the anterior basal margin fringed with blackish pubescence, three following joints gradually less dilated, the fourth small, apical joint long, of nearly equal width, claws long, tips truncate and black; intermediate coxæ each with a short acute tubercle beneath, their femora anteriorly and at tips beneath, as well as their tibiæ except beneath, fulvo-ferruginous, their tarsi pale yellowish-white, with short snow-white pubescence and fringed behind with long hairs, the first joint flattened, broadly dilated posteriorly, narrowed at base and apex especially the latter, three following

joints small, scarcely dilated, terminal joint long, narrowed towards base, claws cleft and black at tip; posterior tibiæ tinged with reddish outwardly, their tarsi pale yellowish-white, first joint as long as remaining joint combined, of equal width, smooth and shining, fringed on both sides with long pale hairs, remaining joints small, strongly lobed at tip, claws tipped with black; abdomen subquadrate, nearly as wide as thorax, first segment broadly and deeply excavated at base and fringed laterally and posteriorly with long pale yellowish hairs, three following segments with a narrow apical fringe of pale ochraceous pubescence, base of fourth and fifth segments with a band of dense pale ochraceous pile, the apical segment covered with a very dense whitish pile, apical margin emarginate centrally, not deeply so. Length .50 inch.

Two specimens. (Belfrage.) Easily recognized by the whitish tarsi and by the remarkable form of the intermediate pair.

Megachile pollicaris.

Megachile pollicaris, Say, Bost. Journ. Nat. Hist. i., p. 406.

Nine ♂ specimens. (Belfrage; Boll.) This may not be the true *pollicaris*, as Say says nothing about the long, prominent, yellow scale-like process, tipped with honey-yellow, at base of anterior tarsi, and of the intermediate legs being red; otherwise the insects accords well with the description given by Say.

Megachile pugnata.

Megachile pugnatus, Say, Bost. Journ. Nat. Hist. i., p. 408.

Four ♂ ♀ specimens. (Belfrage.)

Megachile disparilis, n. sp.

♂.—Black; face and clypeus clothed with a long, dense whitish pubescence, slightly tinged with yellowish, vertex and cheeks with long, thin, white pubescence, slightly mixed with short black pubescence behind ocelli; head large, as broad as thorax, densely and finely punctured; antennæ black, the terminal joint compressed and slightly dilated; thorax closely punctured, clothed with a long, not dense, cinereous pubescence, longer on metathorax and pleura and slightly mixed with black pubescence on mesothorax; tegulæ dull piceous, pubescent; wings subhyaline, dusky on apical margin; legs black, with short yellowish pubescence, that on coxæ and femora beneath long and white; anterior coxæ with a long, subacute blackish spine, before which is a much shorter, slender, acute reddish double spine, their femora within and their tibiæ at tips tinged with honey-yellow, their tarsi whitish, broadly dilated, with a long dense fringe of white pubescence tipped with yellowish posteriorly, first joint with a long pale yellow scale like process anteriorly, hollow within, the tip of which extends beyond tip of second joint, the tip of which is also prolonged nearly to tip of third joint, posterior margin of the joints narrowly black, the apical angles acute, fourth joint small, scarcely dilated, last joint slender, claws cleft and tipped with black; four posterior tarsi simple, densely clothed with yellowish hair, tips more or less tinged with ferruginous; abdomen rather broader than thorax, sides subparallel, shining, minutely punctured, clothed with very short black pubescence, apical margins fringed with a short white pubescence, first segment deeply excavated at base,

clothed with cinereous pubescence, long and more dense laterally, short and slightly mixed with black at apex, the fourth and fifth segments have pale pubescence mixed with the black and the apical fringe on the fourth segment is long, sides of the segments with long white pubescence; apex deeply excavated centrally, the apical edge notched in the middle, with the edge on either side finely denticulated. Length .50 inch.

Two specimens. (Belfrage.)

Megachile amica, n. sp.

♂.—Black; face and clypeus with long very dense white sericeous pubescence, that on vertex long, thin and greenish-cinereous, that on cheeks short and snow-white, longer beneath; head smaller than usual; antennæ black, apex subcompressed and slightly dilated; thorax above clothed with a long, dense greenish-cinereous pubescence, longer posteriorly, and long and white on pleura; tegulæ with long cinereous pubescence; wings hyaline, slightly dusky at tips; legs with whitish sericeous pubescence, long on femora beneath, each anterior coxa with a short blunt spine, their femora and tibiæ within more or less, and the latter at tips, yellowish, their tarsi pale yellowish, flattened, not much dilated, fringed posteriorly with long snow-white pubescence, that within shorter, coarse, black and dilated at tips, first joint about as long as the three following combined, which are short and decrease gradually in length, claws cleft and tipped with black; intermediate tarsi slender, simple, the basal joint posteriorly with a long snow-white fringe of white hairs, posterior trochanters with a tuft of long white pubescence; abdomen as broad as thorax, slightly narrowed posteriorly, shining, feebly punctured, clothed with a short black pubescence, interspersed with a longer cinereous pubescence, longer and more dense at base, apical margin of the segments with a narrow fringe of dense snow-white pubescence, much longer laterally, apex beneath with long, dense white pubescence, above the segment is gradually rather obtusely pointed, beneath the edge is broadly concave, the lateral angles rather prominent. Length .40 inch.

Two specimens. (Belfrage.)

Megachile exilis, n. sp.

♂.—Small, black, densely and strongly punctured; head large, broader than thorax, face, clypeus and cheeks beneath clothed with long, dense, snow-white pubescence, on the vertex it is very sparse and on cheeks above short, on middle of face and base of clypeus the pubescence is less dense and slightly mixed with dusky; antennæ slender, black, pointed at tip; prothorax, metathorax and pleura beneath with long white pubescence; tegulæ piceous; wings hyaline, more or less dusky at tips; legs clothed with short white pubescence, long on femora beneath, anterior tarsi pale ferruginous, three basal joints flat, dilated, fringed with pale pubescence, second joint shorter than first and rather broader, the anterior margin rounded, third joint much smaller, fourth slender, apical joint long, slender, claws cleft, tipped with black; four posterior tarsi slender, simple, fringed posteriorly with long white pubescence; abdomen convex, sides parallel, not narrowed posteriorly, strongly, not very closely punctured, segments transversely depressed at base, clothed with a very short pale subsericeous pubescence, first segment with a deep shining concavity at base, apex with a marginal fringe of snow-white pubescence, more dense laterally, apical margin of four following segments narrowly

smooth, polished and dull testaceous, with a narrow band of short, dense snow-white pubescence at base, apex broadly rather deeply emarginate, with lateral angles prominent. Length .35 inch.

Four specimens. (Belfrage.)

Megachile facunda, n. sp.

♂.—Robust, black, clothed with a short, rather dense, pale ochraceous pubescence, very dense and whitish on face, clypeus, cheeks beneath and on pleura beneath; head large, broad; antennæ slender, simple; thorax very densely sculptured, pubescence thiu on mesothorax, long on metathorax; tegulæ rufo-testaceous; wings hyaline, slightly dusky at tips; legs with pale pubescence posteriorly, smooth and shining anteriorly, four anterior femora and tibiæ within more or less tinged with ferruginous, tarsi slender, simple, fringed behind with long pale pubescence, beneath with short dense yellow pubescence; abdomen broad, about as long as head and thorax, depressed, the segments with an apical fringe of short, dense, pale ochraceous pubescence, long on sides of first segment which is broadly concave at base, basal margin of second and following segments with a band of short dense pale ochraceous pile, which covers the apical segment, the tip of which is deeply notched centrally, the angles acute and directed inwardly, beneath the edge has two short, stout, acute incurved teeth on each side; venter with a long tolerably dense pale pubescence. Length .50 inch.

Four specimens. (Belfrage.) In general appearance this somewhat resembles *comata*, but that species is stouter and has the anterior tarsi dilated.

Megachile frugalis, n. sp.

♂.—Black, opaque; head large, closely punctured, face and clypeus with a long, dense white pubescence, mixed with black on middle of face and base of clypeus, cheeks with long white pubescence, that on vertex long, sparse and mixed with blackish; antennæ slender, black, pointed at tip; thorax opaque, indistinctly punctured, on mesothorax and scutellum the pubescence is cinereous strongly mixed with black and not so dense as to hide the surface, while on the metathorax and pleura it is long, rather dense and white; wings subhyaline, faintly tinged with yellowish, apex fuliginous, slightly violaceous; legs slender, simple, clothed with white pubescence, long on femora behind and dense on tarsi, the anterior pair of which have a long fringe posteriorly; abdomen convex, shining, closely and finely punctured, clothed with short cinereous sericeous pubescence, the segments with a narrow apical fringe of short, dense snow-white pubescence, first segment deeply concave at base, apical segment irregularly concave, the posterior edge compressed, deeply notched centrally leaving a subacute tooth on each side, the lateral edge very irregular, with a short tooth on each extreme side, beneath the edge has a single obtuse central tooth. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.) A very distinct species. The pubescence of the face is curiously arranged, that on the sides is directed laterally, that on the middle upwardly, that on the clypeus except base downwardly, while the black pubescence on base of clypeus is erect and conspicuous.

Megachile gentilis, n. sp.

♂.—Small, black, closely and finely punctured; head large, transverse, broader than thorax; the face as far up as lower ocellus and the clypeus clothed with a long dense pale yellow pubescence, that on cheeks white and long beneath, that on vertex thin and brownish-yellow; antennæ slender, black, pointed at tip; thorax clothed with rather dense cinereous pubescence, long on scutellum, metathorax and pleura where it is white, and short and thin on mesothorax scarcely obscuring the surface; wings hyaline, faintly dusky at tips; legs slender, simple, clothed with white pubescence, long and dense on anterior femora and tarsi behind; abdomen shining, segments 1—4 with an apical fringe of snow-white pubescence, first segment broadly deeply concave at base, clothed posteriorly and laterally with long cinereous pubescence, near basal margin of segments 3—5 a narrow band of whitish pile, sometimes indistinct, apical segment more or less clothed centrally with a patch of dense white pubescence, the apex deeply notched, the sides sometimes more or less denticulated; venter banded with whitish pubescence. Length .40 inch.

Seven specimens. (Belfrage.)

Megachile brevis.

Megachile brevis, Say, Bost. Jour. Nat. Hist. i., p. 407.

Four ♂ specimens. (Belfrage.)

Megachile inimica, n. sp.

♀.—Long, narrow, parallel, black, opaque, densely punctured; head large, subcubical, broad behind eyes, face with dense yellowish pubescence, sparse on clypeus, cheeks beneath with long yellowish pubescence; prothorax, lateral margin of mesothorax, scutellum posteriorly, metathorax and pleura clothed with a more or less dense yellowish pubescence; mesothorax with short sparse blackish pubescence, longer on scutellum; tegulæ rufo-testaceous; wings yellowish-fuscous, darker and subviolaceous on costal tip; legs ferruginous, fringed with yellowish pubescence; abdomen elongate, narrow, obtusely pointed at tip, the segments with a narrow apical fringe of dense short yellow pubescence, otherwise the pubescence above is very short and black; ventral scopa yellow, brown on last segment. Length .55—.60 inch.

Two specimens. (Belfrage.)

Megachile incrosa, n. sp.

♀.—Same form as *inimica*, with the head more cubical, and cheeks broader; black, clothed with cinereous pubescence; vertex very densely and finely punctured, cheeks with large sparse punctures; face and cheeks beneath with dense cinereous pubescence, which on vertex is sparse and mixed with black; clypeus short, transverse, anterior edge tuberculated; mandibles large, rugose, fringed beneath with long golden hairs; thorax above with short cinereous and black mixed pubescence, on collar, metathorax and pleura it is long, dense and white; tegulæ black, wings pale fusco-hyaline, much darker on apical margin; legs black, the femora with whitish pubescence, long on anterior pair behind, the tibiæ and tarsi with golden pubescence; abdomen shorter than in preceding species, the segments, except last, with a narrow apical fringe of snow-white pubescence which is dense on sides of first segment; ventral scopa pale yellow. Length .55 inch.

One specimen. (Coll. G. W. Belfrage.)

Megachile grandis, n. sp.

♀.—Large, robust, opaque black; head large, transverse, densely punctured; face as far up as ocelli, and cheeks with dense white sericeous pubescence, that above antennæ faintly tinged with yellowish; clypeus with thin cinereous and black pubescence, the truncate tip fringed with yellow hairs, also the mandibles beneath, the vertex has a short sparse black pubescence; thorax very densely punctured, prothorax, mesothorax and pleura clothed with a rather dense white sericeous pubescence, that on mesothorax very short and strongly mixed with black, as well as on scutellum where it is longer; wings more or less tinged with fuliginous, apex darker; legs slender, clothed with short white pubescence, much longer on trochanters and femora beneath, that on tarsi beneath dense and yellow; abdomen about as long as head and thorax, broad at base, slightly narrowed posteriorly, the tip obtuse, the segments above with a very short black pubescence, the first to fifth with a narrow apical fringe of white pubescence, first segment broadly concave at base, sides and apex with rather long cinereous pubescence, apical segment entirely black, the tip with a compressed rounded projection; ventral scopa generally white, sericeous sometimes tinged with yellowish, at extreme apex black. Length .50—.65 inch.

Fourteen specimens. (Belfrage; Boll; Heiligbrodt.) In fresh specimens the ventral scopa is silky white, the yellow tinge being caused by admixture of pollen.

Megachile pruina.

Megachile pruina, Smith, Brit. Mus. Cat. i., p. 190.

Fourteen ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Megachile optiva, n. sp.

♀.—Short, robust, black, opaque, closely punctured; head transverse, broader than thorax, sides of face and cheeks beneath with long whitish pubescence, above antennæ and on vertex it is long, sparse and black, on clypeus it is thin, white and appressed; prothorax, sides of metathorax and pleura with long, dense whitish pubescence, on mesothorax it is short and black, on scutellum longer and black; wings dusky at tips; legs with short cinereous pubescence, long on femora behind, tarsi beneath with short dense yellow pubescence; abdomen short, broad, obconic, deeply and broadly concave at base, sides and apex of first segment clothed with rather long cinereous pubescence, apical margins of segments 2—5 with a narrow fringe of white pubescence, apical segment obtusely pointed, obscurely pale sericeous, with sparse black hairs; ventral scopa pale yellowish-white. Length .45 inch.

Two specimens. (Belfrage.)

Megachile nupta, n. sp.

♀.—Short, robust, black, clothed with pale ochraceous pubescence; head broad, transverse, the face as far up as ocelli, cheeks beneath and apical corners of clypeus with dense whitish pubescence, on vertex the pubescence is short, sparse and yellowish; clypeus strongly and rather sparsely punctured, shining, with short sparse yellowish pubescence, except on apical corners where it is long and whitish; on prothorax, lateral margin of mesothorax, scutellum, sides of metathorax and pleura the pubescence is dense, long and pale

ochraceous, on mesothorax it is very short and sparse, except in front where it is longer and more dense; wings dusky at tips; legs with short pale pubescence, on tarsi beneath dense and yellow; abdomen broad, obovate, deeply concave at base, sides of first segment and narrow apical margin of segments 1-5 with pale ochraceous pubescence; ventral scopa pale yellowish-white. Length .45 inch.

Three specimens. (Belfrage.) Same size as *optiva*, but less broad, with the pubescence of a different color.

Megachile languinosa.

Megachile languinosa, Smith, Brit. Mus. Cat. i., p. 190.

Twelve ♀ specimens. (Belfrage; Boll.) This is probably the ♀ of *brevis*, Say.

Megachile studiosa, n. sp.

♀.—Small, narrow, parallel, opaque black, head and thorax closely and strongly punctured; head large, not broader than thorax, face and cheeks beneath with dense whitish pubescence; clypeus coarsely punctured, with short sparse whitish hairs; mandibles large; vertex and cheeks with very sparse pubescence; mesothorax and scutellum with very short and sparse black pubescence; a small tuft on each side behind tegulæ, another in front and another beneath, of dense snow-white pubescence, on sides of metathorax, prothorax and pleura the pubescence is long and whitish; wings slightly dusky at tips; legs slender, with short pale pubescence; abdomen as long as head and thorax, sides parallel, above convex, shining, sparsely punctured, clothed with short black pubescence, base broadly concave, apical margins of segments 1-5 with a narrow fringe of snow-white pubescence, that on first segment dilated laterally, apex obtuse; ventral scopa white. Length .38 inch.

Three specimens. (Belfrage.)

Megachile osmoides, n. sp.

♀.—Small, narrow, parallel, black, closely and rather coarsely punctured; head very large, nearly as large as thorax, very full behind eyes, the vertex being unusually long; face and cheeks beneath with dense white pubescence, on clypeus it is short and sparse, while on vertex it is still more so; middle of vertex smooth and shining, with a few large scattered punctures; prothorax, mesothorax anteriorly, a line over tegulæ, scutellum posteriorly, metathorax, and pleura anteriorly and posteriorly, more or less densely clothed with long white pubescence; tegulæ smooth and polished, black; wings hyaline; legs with thin whitish pubescence; abdomen convex, shining, finely punctured, sides parallel, base broadly concave, apical margins of segments 1-4 with a narrow fringe of snow-white pubescence, dilated on sides of first, apex with a very short dense pale sericeous pile, very dense on apical margin of last segment, which is obtusely rounded; ventral scopa pale yellowish. Length .33—.36 inch.

♂.—Head less enlarged behind eyes; face, clypeus and thorax laterally and posteriorly more densely pubescent; apex of abdomen with four broad, prominent, equidistant teeth, the two central ones truncate at tip. Length .33 inch.

Four specimens. (Belfrage.) This resembles certain species of *Osmia* very much in form.

Megachile variolosa, n. sp.

♀.—Very small, long, parallel, much the general form of *osmoides*, but much smaller and more coarsely punctured, head smaller, not unusually enlarged behind eyes; punctures of thorax large, the pubescence much as in preceding species; wings faintly dusky, darker at tips; legs with thin white pubescence; abdomen shaped and clothed as in *osmoides*, except that the apex is not clothed with a pale pile, first and second segments with fine, rather close punctures, on third and fourth segments the punctures are suddenly large, being double the size of those on the two preceding segments, on fifth segment they are smaller and on apical segment small and very dense; ventral scopa white. Length .20—.25 inch.

Two specimens. (Belfrage.)

Anthidium zebratum, n. sp.

♂.—Differs from ♂ *occidentalis*, Cress., only as follows:—Large and more robust, the pubescence on head and thorax more yellowish; pro- and mesothorax immaculate; scutellum with two pale yellowish spots; abdominal fasciæ broad laterally and gradually narrowed in the middle, all emarginate. Length .55 inch.

One specimen. (Heiligbrodt.) This also occurs in Colorado.

Anthidium interruptum.

Megachile interrupta, Say, Long's 2d Exped. ii., p. 352.

Anthidium curvatum, Smith, Brit. Mus. Cat. ii., p. 215.

Two ♂ ♀ specimens. (Belfrage.)

Anthidium concinnum, n. sp.

♀.—Black, densely punctured; sides of face, narrow anterior orbits and a short line behind summit of eyes, yellowish; sides of face clothed with a pale ochraceous pubescence; thorax more densely punctured than head, finely so on the middle which has a well impressed longitudinal line; a spot on each side of mesothorax anteriorly, a spot on each basal corner of scutellum, its posterior margin slightly interrupted medially, and the tubercles, yellow; postscutellum, sides of metathorax and pleura clothed with a pale ochraceous pubescence, short and pale on pleura; tegulæ ferruginous, with a large yellow spot anteriorly; wings fuliginous, paler centrally and at extreme base, a dark streak through marginal cell; legs entirely fulvo-ferruginous, sericeous with pale hairs, tarsi with short yellow hair, tibiæ yellowish at extreme base; abdomen marked as in *simile*, Cress., the markings being less heavy, and of a pale lemon-yellow color, and the surface more closely punctured; ventral scopa fuscous. Length .35 inch.

♂.—Clypeus and mandibles yellow; basal segment of abdomen tinged with ferruginous, fifth segment with a band similar to that on preceding segment, disk of sixth segment stained with yellowish ferruginous, apical segment pale yellowish, trilobate at apex, middle lobe small. Length .35 inch.

Three specimens. (Belfrage.) Much like *simile*, Cress. (Proc. Ent. Soc. Phil. ii., p. 378), differing principally by the color of the legs.

Anthidium notatum.

Anthidium notatum, Latr. Ann. Mus. Hist. Nat. 13., p. 48, 231. †

One ♀ specimen. (Belfrage.)

Ceratina dupla.

Ceratina dupla, Say, Bost. Journ. Nat. Hist. i., p. 397.

Five ♂ ♀ specimens. (Belfrage.)

Nomada texana, n. sp.

♀.—Black; head densely punctured, thinly pubescent; sides of the face and short line behind summit of eyes yellow; labrum, mandibles and three or four basal joints of antennæ ferruginous; thorax densely and coarsely punctured; collar, two spots on scutellum, postscutellum, tubercles, transverse subarcuate mark on pleura and the tegulæ, lemon-yellow; collar prominent especially on each side; scutellum obtusely bituberculate; metathorax not distinctly punctured, the upper surface except the basal triangular space clothed with a dense appressed silvery-sericeous pile; wings subhyaline, the apical two-thirds of costa broadly fuscous, clear at tip of third submarginal cell; legs entirely fulvo-ferruginous, with a pale pubescence, extreme apex of posterior tibiæ more or less yellow, four posterior coxæ with a small yellow spot; abdomen closely and finely punctured, first segment shining, very minutely punctured, each segment, except the last, with a subapical lemon-yellow band, narrow and tolerably even on first segment, broad and much narrowed medially on second segment, very narrow on third and fourth segments, broader laterally, and broad on fifth segment, apical segment with black pubescence; venter varied with ferruginous, the third segment generally with a yellow spot on each side. Length .35 inch.

♂.—Face, clypeus, spot above, labrum and base of mandibles lemon-yellow; abdomen clothed with a pale sericeous pile, apical segment narrow and emarginate at tip. Length .35 inch.

Fourteen specimens. (Belfrage; Boll.)

Nomada lepida.

Nomada lepida, Cress. Proc. Ent. Soc. Phil. ii., p. 288.

One ♂ specimen. (Belfrage.)

Nomada maculata.

Nomada maculata, Cress. Proc. Ent. Soc. Phil. ii., p. 303.

Three ♀ specimens. (Boll.)

Epeolus remigatus.

Melecta remigata, Fabr. Syst. Piez., p. 387.

Epeolus remigatus, Fabr. Cress. Proc. Ent. Soc. Phil. ii., p. 393.

Two ♀ specimens. (Belfrage; Boll.)

Epeolus lunatus.

Epeolus lunatus, Say, Long's 2d Exped. ii., p. 354. Cress. Proc. Ent. Soc. Phil. ii., p. 394.

Fourteen ♂ ♀ specimens. (Belfrage; Boll.)

Epeolus fumipennis.

Epeolus fumipennis, Say, Bost. Journ. Nat. Hist. i., p. 403.

One ♀ specimen. (Belfrage.)

Cœlioxys texana, n. sp.

♀.—Black, head and thorax opaque, covered with large coarse punctures; face and clypeus clothed with a short appressed whitish pubescence, more dense on anterior orbits and anterior margin of clypeus; anterior ocellus placed in the middle of a prominence, on each side of which is a tuft of fuscous pubescence; cheeks clothed with a white scale-like pubescence, the punctures of vertex more or less filled in with whitish scales; two basal joints of antennæ more or less red; thorax with large, close, not confluent punctures, scutellum rounded posteriorly with a rather long robust tooth on each side at base; a line of yellow or whitish scale-like pubescence on anterior margin of mesothorax more or less interrupted into spots on the middle, generally continued narrowly over the tegulæ to posterior margin and sometimes connected with the band in suture at base of scutellum, sometimes there is a longitudinal line of similar pubescence on anterior middle of mesothorax; sides of mesothorax, pleura and under side of scutellum clothed more or less densely with pale cinereous pubescence, a tuft on each side above behind, tegulæ and two transverse lines on pleura, the anterior one margining the sides of prothorax and in front of tubercles, of dense white pubescence; tubercles tinged with ferruginous; tegulæ fulvous; wings hyaline, apical margins narrowly fuliginous; legs ferruginous, covered with white scales, tarsi black, clothed within with yellowish pubescence; abdomen long, polished, sparsely punctured, those on four basal segments large, close laterally, those on the two apical segments much smaller and closer, narrow basal margin of first segment, narrow apical margins of segments 1—5 and a short subbasal line on each side of segments 2—4, of dense white or pale ochraceous scales, apical segment short, obtusely pointed at tip, the apical margin depressed and rough and fringed with erect black hairs, inferior plate a third longer, broad, of equal width, the apex broadly rounded and fringed with black hairs; ventral segments more or less tinged with ferruginous, the apical margins with white pubescence. Length .40—.60 inch.

♂.—Face and clypeus more densely pubescent; abdominal segments 2—5 each with a subbasal lateral band of dense white scales; apical segment deeply concave above, with a short acute tooth on each side at base, the apex with six short more or less irregular teeth, the upper tooth of lateral pair sometimes obsolete. Length .48 inch.

Ten specimens. (Belfrage; Boll.) Resembles *alternata*, Say, from which it is distinguished by the ferruginous legs, black tarsi, and broadly rounded inferior plate of abdomen.

Cœlioxys edita, n. sp.

♂.—Black, densely, coarsely and confluent punctured; face, as high up as ocelli, and clypeus clothed with a short dense white or pale ochraceous pubescence; anterior ocellus surrounded by a radiating fringe of pubescence; anterior, lateral and middle of posterior margin of mesothorax covered with white or pale ochraceous scales, that on anterior margin dilated into two spots on middle; scutellum beneath, metathorax and pleura clothed with white or

pale ochraceous pubescence, that on pleura short and arranged in two narrow transverse bands meeting beneath and in front of tegulæ; scutellum broadly rounded behind, with a stout subacute tooth on each side at base; tegulæ dull testaceous; wings hyaline or subhyaline, apical margins pale fuliginous; legs entirely ferruginous or fulvo-ferruginous, clothed with pale pubescence, tips of tarsi dusky; abdomen robust, deeply, closely punctured, the second and following segments with a deeply impressed median transverse line, first segment broadly and deeply concave at base, sometimes tinged with ferruginous, the basal margin more dense laterally, the apical margins of segments 1—5, basal margins of segments 5 and 6 and sometimes the transverse impressed lines laterally, covered with a white or pale ochraceous scale-like pubescence; apex with eight short teeth, one on each side of fifth and sixth segments and two pair at apex; venter more or less stained with ferruginous, and banded with white pubescence. Length .35—.45 inch.

Six specimens. (Belfrage.)

***Cœlixys insita*, n. sp.**

♀.—Black; head and thorax with large coarse punctures, and cheeks and mandibles covered with a short appressed cinereous scale-like pubescence, more dense on face and clypeus, anterior margin of the latter fringed with yellowish pubescence, a tuft of long cinereous pubescence on each side of anterior ocellus; posterior margin of occiput, anterior margin of mesothorax continued beneath tegulæ and narrowly over them, spot behind tegulæ and two spots at base of scutellum covered with a whitish pubescence; scutellum beneath and metathorax clothed with a long dense cinereous pubescence, the pleura has two bands of pubescence as in preceding species; scutellum broadly rounded posteriorly, with a long, blunt, slightly incurved tooth on each side at base; tegulæ dull testaceous; wings hyaline, more or less fuliginous at apex; legs ferruginous, with whitish pubescence; abdomen shining, closely and strongly punctured, sparsely so on posterior middle, first and second segments with a deeply impressed median transverse line, basal sides of first segment, and narrow, even, apical margins of segments 1—5 fringed with short white pubescence, apical segment densely and finely punctured, convex at base, depressed and acuminate at tip which is acute, inferior plate long, narrow, obtusely pointed at tip, much longer than superior; venter banded with white pubescence. Length .40—.45 inch.

Four specimens. (Belfrage.)

***Cœlixys 8-dentata*.**

Cœlixys 8-dentata, Say, Long's 2d Exped. ii., p. 353.

Three ♂ specimens. (Belfrage.)

***Cœlixys scitula*, n. sp.**

♀.—Small, black, shining; head and thorax with large, not close, punctures; face, clypeus, cheeks and posterior margin of occiput clothed with a short dense white pubescence; mandibles tinged with ferruginous; anterior margin of mesothorax, interrupted medially and continued down on each side of pleura, another line on posterior part of pleura, a spot on each side behind tegulæ, suture at base of scutellum and base and sides of metathorax clothed with white pubescence, that on metathorax long; scutellum broadly rounded

posteriorly, with a sharp tooth on each side; tegulæ fulvo-testaceous; wings fuliginous, violaceous, basal half hyaline; legs fulvo-ferruginous, with whitish pubescence, tips of tarsi dusky; abdomen long, polished, sparsely punctured, especially on the middle, transversely rather deeply impressed on each side of segments 2—4, basal margin of first segment, and apical margins of segments 1—5 narrowly fringed with white pubescence or scales, apical segment much depressed at tip which is obtusely pointed and clothed with black pubescence, inferior plate uniformly broad to apex which is rounded laterally, fringed with fuscous or black pubescence and with a small acute tubercle on extreme apex; venter sometimes tinged with ferruginous and banded with white pubescence. Length .35—.40 inch.

♂.—Abdomen with eight short teeth at apex, one on each side of fifth and sixth segments and two pairs at apex the lower ones longer and acute, the segment deeply incised above at tip. Length .35 inch.

Five specimens. (Belfrage.)

***Stelis costalis*, n. sp.**

♀.—Black; head densely and coarsely punctured, face and clypeus clothed with a short, thin whitish pubescence; anterior orbits, broader on each side of face, and a short line behind ocelli, yellow; anterior margin of clypeus fringed with yellowish pubescence; mesothorax and scutellum with large rather close punctures, a line on anterior margin of mesothorax, broadly interrupted medially, and continued narrowly on lateral margin, posterior margin of scutellum and a spot on each basal corner, lemon-yellow; prothorax, sides of metathorax and pleura clothed with white pubescence; metathorax abruptly truncated, the basal margin coarsely crenulated; tubercles and stain beneath tegulæ honey-yellow; tegulæ honey-yellow, with a pale fuscous pupil; wings subhyaline, the costa broadly fuscous from basal fourth to apex, the second recurrent nervure received beyond apex of second submarginal cell; legs entirely fulvo-ferruginous, with short pale pubescence; abdomen elongate, convex, not wider than thorax, three basal segments with large, not close punctures, the apical segments more closely punctured and clothed with a short golden pubescence, first segment with a narrow subapical pale yellowish band squarely indented on each side posteriorly, second segment with a short lateral apical pale yellowish line, third and fourth segments with a narrow subapical band of same color, that on the third squarely indented on each side anteriorly, that on the fourth somewhat undulated, apex broadly rounded, apical margins of the segments narrowly subtaceous, smooth and shining; venter sparsely clothed with pale hairs, apical segment broadly rounded and clothed with short dense fulvous pubescence. Length .35 inch.

♂.—Clypeus tinged with brown, with a pale yellowish spot on each side; mandibles tinged with ferruginous; a narrow interrupted obscure yellowish line behind ocelli; second abdominal segment with two small distinct yellow spots on apical middle on a line with lateral spot, third, fourth and fifth segments each with a tolerably broad yellow subapical band, indented on each side anteriorly and slightly notched in the middle, the sixth segment tinged with ferruginous, with a transverse apical yellow spot, apical segment black, with a short central tooth, sides not lobed. Length .30 inch.

Two specimens from Bosque and Comal Counties. This has much the appearance of an *Anthidium*, but the ♀ venter is only sparsely pubescent.

***Stelis lateralis*.**

Stelis lateralis, Cress. Proc. Ent. Soc. Phil. ii., p. 410.

Two ♀ specimens. (Belfrage.)

***Melecta interrupta*, n. sp.**

♀.—Large, very robust, black, densely and finely punctured; the face about insertion of antennæ and posterior margin of occiput, the later interrupted medially by black, clothed with long ochraceous pubescence; anterior half of mesothorax, except two black patches on anterior middle, sides of metathorax and upper half of pleura clothed with a dense ochraceous pubescence, remainder of mesothorax and scutellum nude, the latter depressed on posterior middle, with a short obtuse tubercle on each side; a small smooth polished spot on each side of the disk of mesothorax opposite tegulæ; wings dark fuscous, with two hyaline spots at tips of third marginal and discoidal cells and subhyaline streaks in the cells; legs black, the coxæ, knees and tibiæ with more or less whitish pubescence; abdomen robust, convex, velvety-black, impunctured, each segment with a broad apical band of dense appressed pale ochraceous pubescence, broadly interrupted medially, especially on apical segments, and dilated laterally. Length .55 inch.

♂.—Smaller, less robust; a tuft of ochraceous pubescence at base of clypeus; antennæ not longer than in ♀ but much more robust, being unusually thickened; the two patches on anterior middle of mesothorax sometimes obsolete; legs brown-black, the outer side of intermediate tibiæ covered with a short dense ochraceous pile; abdomen as in ♀, except that the bands are more confluent laterally. Length .45 inch.

Two specimens from Dallas and Comal Counties.

***Melissodes atripes*, n. sp.**

♀.—Large, robust, deep black; face, clypeus and cheeks clothed with a dense ochraceous pubescence, the occiput with a long yellow pubescence; tips of mandibles fulvous; flagellum beneath brown; thorax above and triangular patch beneath tegulæ clothed with a short very dense yellow pubescence, longer and paler on metathorax, remainder of pleura clothed with a dense jet-black pubescence; tegulæ testaceous; wings uniformly dark fuliginous, darker along costa; legs entirely black, with jet-black pubescence; abdomen shining, basal half of first segment and narrow basal margin of second segment clothed with a short appressed ochraceous pubescence; on each side of third segment an oblique line of white pubescence; sides of the fourth and the two apical segments clothed with a jet-black pubescence; disk of apical segment broad, rounded at apex, covered with a golden pile, sides reflexed. Length .75 inch.

One specimen. (Coll. G. W. Belfrage.)

***Melissodes obliqua*.**

Macrocera obliqua, Say, Bost. Journ. Nat. Hist. i., p. 403.

Seven ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Melissodes Comanche, n. sp.

♀.—Black; face, clypeus, labrum and cheeks clothed with a short dense ochraceous pubescence, the occiput with a long pale fulvous pubescence; tips of mandibles fulvous; flagellum beneath except two basal joints fulvo-testaceous; thorax clothed with a very dense bright fulvo-ochraceous pubescence, darker on mesothorax, longer and paler on postscutellum, metathorax and pleura beneath; a round patch on posterior middle of mesothorax and the scutellum clothed with a dense black pubescence; tegulæ brown; wings pale fuliginous and violaceous at apex, yellowish at base; legs piceous-brown, tibiæ and tarsi densely clothed with a fulvo-ochraceous pubescence, reddish brown within, short on two anterior pairs, long on posterior pair, tarsi ferruginous; abdomen shining, very minutely punctured, basal two-thirds of first segment and sides of apical third clothed with an ochraceous pubescence, narrow basal margin of second segment, and oblique line on each side of second and third segments, and a broad apical band on fourth segment, of short, dense, appressed pale ochraceous pubescence, almost white in certain lights, lateral basal margin of third segment, and basal margins of three following segments of black pubescence, apical margins of two apical segments fringed with long fulvo-ochraceous pubescence, disk of apical segment as in *atripes*; venter piceous-brown, the segments fringed with brown pubescence. Length .80 inch.

♂.—More slender than ♀; clypeus, labrum and spot at base of mandibles yellowish-white; antennæ as long as head and thorax, flagellum fulvo-testaceous beneath; abdomen narrower, less distinctly marked than in ♀, second segment with a broad band of appressed ochraceous pubescence at base and the third and fourth each with a subbasal narrow, arcuate band of ochraceous pubescence, sometimes interrupted on basal middle, leaving only an oblique spot on each side, apical segments clothed with black pubescence; venter clothed entirely with black pubescence. Length .75 inch.

Five specimens. (Belfrage; Boll.) The ♀ of this species closely resembles that of *obliqua*, but the latter species has the pubescence of the pleura and four anterior legs entirely black, the patch of black pubescence on posterior middle of mesothorax is very broad and quadrate, and the second abdominal segment is entirely black except basal margin. The males of the two species are entirely different.

Melissodes texana, n. sp.

♀.—Black; face and clypeus clothed with a short dense pale ochraceous pubescence, occiput and cheeks with dense ochraceous pubescence; clypeus sometimes tinged with brown; labrum with golden yellow hair; mandibles with a fulvous spot or line near apex, sometimes obsolete; antennæ short, black or brown above, more or less varied with brown or testaceous beneath; thorax clothed with a dense ochraceous pubescence, longer and paler on metathorax and pleura, posterior disk of mesothorax and the scutellum more or less nude; tegulæ varies from testaceous to piceous; wings subhyaline, more or less dusky at apex, base sometimes tinged with yellowish; legs vary from piceous to fulvo-testaceous, clothed with ochraceous pubescence when free from pollen which makes the pubescence sometimes ferruginous, sometimes bright yellow; abdomen shining, very minutely punctured, basal half of first segment

clothed with a long appressed ochraceous pubescence; basal margin of second segment, an oblique line on each side dilated laterally, a broad band on third and fourth segments, that on third interrupted in the middle and somewhat oblique laterally, clothed with short dense whitish pubescence; apical segments clothed with black or fuscous pubescence, more or less mixed with yellowish laterally; disk of apical segment rather broad, rounded at apex. Length .55—75 inch.

♂.—Clypeus, labrum and spot at base of mandibles yellowish white; antennæ not as long as head and thorax, brown or testaceous beneath; posterior disk of mesothorax and scutellum thinly clothed with a short black or fuscous pubescence; anterior part of pleura more or less stained with rufo-testaceous; abdomen more densely pubescent than ♀, a double band on second segment confluent laterally, the apical one slightly interrupted medially, and a sub-basal band on three following segments, also slightly interrupted medially, that on fifth segment narrow, the color of these bands varies from white to ochraceous. Length .60 inch.

Seven specimens. (Belfrage; Boll.) Smaller than either of the two preceding species, and while the ♀ more closely resembles that of *Comanche*, the ♂ is more nearly allied to that of *obliqua*. The three species are, however, quite distinct.

Melissodes rivalis, n. sp.

♂.—Black, head and thorax clothed with a dense whitish pubescence, that on occiput and thorax above slightly tinged with pale ochraceous; clypeus yellowish-white; tips of mandibles honey-yellow; antennæ as long as head and thorax, brown or pale fulvous beneath, sometimes entirely fulvous; posterior disk of mesothorax and scutellum very thinly clothed with pubescence which is short and generally slightly mixed with black; tegulæ fuscous; wings hyaline, apical margin faintly dusky; legs clothed with short pale pubescence, dense on tibiæ and tarsi and yellowish on latter; abdomen oblong-ovate, convex, shining, minutely punctured, thinly clothed with a short pale pubescence, first segment at base and sides clothed with a rather long, sub-erect pale pubescence, each segment with a subapical fascia of short appressed whitish pubescence, generally more or less interrupted medially on basal segments, quite narrow on first segment, moderately broad on remaining segments, lateral margin of fourth and following segments carinate, ending in a prominent tooth on fifth and following segments, that on the sixth large and subacute. Length .45—.55 inch.

Five specimens. (Belfrage; Boll.) Nearly allied to the ♂ of *menuachus*, but with shorter antennæ and more distinctly banded abdomen.

Melissodes menuachus.

Melissodes menuachus, Cress. Trans. Am. Ent. Soc. i., p. 388.

Twenty ♂ ♀ specimens. (Belfrage; Boll.)

Melissodes intorta, n. sp.

♂.—Black, clothed with a rather dense cinereous pubescence, short on clypeus and labrum and on mesothorax, where it is slightly mixed with black; antennæ shorter than usual, scarcely reaching to scutellum, flagellum testaceous beneath; thorax deeply, rather coarsely punctured; mesothorax posteriorly and scutellum very thinly pubescent, almost nude, shining; the pubescence on metathorax and pleura long and pale; tegulæ piceous; wings hyaline, apical margin faintly dusky; tibiæ and tarsi densely clothed with short pale pubescence, yellowish on tarsi within; abdomen elongate, subconvex, shining, thinly pubescent with short pale glittering hairs which fringe the submargins of the segments, more dense laterally, sparsely punctured, the apical margin of the segments depressed, smooth, impunctured, and narrowly edged with pale testaceous, first segment clothed at base and sides with a suberect pale pubescence; apical segments armed laterally as in *rivalis* except that the teeth on the sixth segment is longer and larger. Length .50 inch.

Two specimens. (Belfrage.) Easily distinguished from the two preceding species by the black clypeus, the short antennæ, the paler pubescence and absence of bands on the abdomen.

Melissodes Belfragei, n. sp.

♀.—Robust, black, clothed with a dense white pubescence, cinereous on occiput and thorax above and short on clypeus which is rather coarsely and confluent punctured; labrum covered with dense ochraceous hairs; mandibles tinged with yellowish at tips; disk of mesothorax thinly pubescent and sparsely punctured; tegulæ fuscous; wings hyaline, faintly dusky at tips; legs with pale ochraceous pubescence, that on tibiæ and tarsi within yellowish or brownish; abdomen broad, depressed, velvety-black, first segment thickly clothed with a suberect cinereous pubescence, second, third and fourth segments each with a rather broad, even, continuous, subapical band of short, dense, appressed, snow-white pubescence, their apical margins smooth and polished, apical margins of two terminal segments with cinereous pubescence. disk of apical segment broad and broadly rounded at apex; ventral segments fringed with long pale ochraceous pubescence. Length .53 inch.

One specimen. (Coll. G. W. Belfrage.) This lovely species is distinguished at once by the three beautiful, rather broad, snow-white bands on abdomen.

Melissodes intermedia, n. sp.

♀.—Short, robust, black; head thickly clothed with pale cinereous pubescence, long on face and occiput on which latter it is ochraceous and slightly mixed with black; clypeus almost nude, rather coarsely and confluent punctured; labrum covered with dense ochraceous hairs; mandibles tinged with yellowish at tips; thorax clothed with a very dense yellowish-ochraceous pubescence, longer and pale on metathorax and pleura, shorter and thin on posterior disk of mesothorax and scutellum where it is more or less mixed with black; tegulæ piceous; wings hyaline, dusky at apex; legs clothed with pale ochraceous pubescence, that on tips of four posterior tibiæ and on all the tarsi within brownish; abdomen short, broad, subconvex, shining, closely and

finely punctured except on apical margins which are smooth, subdepressed; basal half and sides of first segment with suberect pale ochraceous pubescence, base of second segment and apical margins of second, third and fourth segments with a narrow band of short, dense, appressed, white pubescence, more dense at the extreme apical edge of the segments, two apical segments fringed with pale pubescence, disk of apical segment as in *Belfragei*; venter with brown pubescence, whitish at extreme sides. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.) This seems intermediate between *Belfragei* and *honesta* and may be the ♀ of the latter. The abdomen has four whitish bands, there being two on second segment.

Melissodes honesta, n. sp.

♂.—Black, shining; head with long pale pubescence, dense and whitish on cheeks, and more or less yellowish on vertex and occiput; clypeus prominent, punctured, shining, pale yellow, apical margin black; labrum densely pubescent; mandibles tinged with yellowish at tips; antennæ long, reaching beyond apex of first abdominal segment, entirely black; thorax clothed with a dense, rather long pubescence, yellowish fulvous above, and pale on metathorax and pleura, on disk of mesothorax and on scutellum it is thin; tegulæ fuscous; wings hyaline, dusky at apex; legs with whitish pubescence, yellowish on tarsi within; abdomen ovate, convex, shining, finely punctured, apical margins of the segments smooth and polished, first segment clothed with rather long cinereous or pale ochraceous pubescence, the basal half of second segment with very short cinereous pubescence, the second and four following segments each with a rather broad subapical band of short, dense, appressed, whitish pubescence, sides of apical segments unarmed and with long scattered pale hairs. Length .45—.52 inch.

Five specimens. (Belfrage; Boll.)

Melissodes pygmæa, n. sp.

♀.—Small, black, shining, sparsely and finely punctured; face and cheeks with dense whitish pubescence, thinly scattered over clypeus; occiput with long dense ochraceous pubescence; antennæ brown toward tips, the flagellum brown-testaceous beneath; thorax clothed with a rather dense, short, ochraceous pubescence, not entirely hiding the shining surface of mesothorax and scutellum, on postscutellum the pubescence is long and dense, on metathorax and pleura it is pale; tegulæ pale fuscous; wings short, hyaline, nervures and stigma honey-yellow; legs clothed with pale ochraceous pubescence, that on posterior tibiæ and base of tarsi long, dense and more or less tinged with brown, tips of tarsi honey-yellow; abdomen oblong-ovate, first and second segments smooth and polished, the former clothed at base and sides with a suberect pubescence, remaining segments at base with a very short dense brown sericeous pubescence and at apex with a broad band of very short dense appressed whitish pubescence, becoming long on lateral margins. Length .30 inch.

Two specimens. (Belfrage.) This is the smallest species of this genus known to me.

Melissodes enavata, n. sp.

♀.—Robust, black, head and thorax clothed with a dense ochraceous pubescence; vertex smooth, shining, impunctured; clypeus and labrum with coarse shallow punctures; antennæ very short, flagellum brownish beneath; disk of mesothorax and scutellum smooth, shining, impunctured, entirely nude (probably rubbed); tegulæ piceous; wings subhyaline, slightly tinged with yellowish, apical margins dusky; legs thickly clothed with ochraceous pubescence, long and very dense on posterior tibiæ and base of tarsi, tips of the latter ferruginous; abdomen broad, depressed, thinly covered with a short appressed ochraceous pubescence, longer and more dense laterally and especially dense on lateral margins, base and sides of first segment with erect pubescence, apical margin of fifth segment with dense ochraceous pubescence, disk of apical segment narrow, cuneiform, pointed at apex; ventral segments with an apical band of long, dense ochraceous pubescence. Length .54 inch.

Two specimens. (Belgrave.) The pubescence is of a uniform ochraceous color, the antennæ shorter than usual, and the disk of apical segment of abdomen unusually narrow and pointed at apex.

Melissodes spissa, n. sp.

♀.—Robust, black, closely punctured; face and cheeks with rather long, not dense pale pubescence, that on sides of clypeus short and scattered, that on occiput long and yellowish; clypeus densely punctured; labrum with dense ochraceous pubescence; mandibles fringed beneath with long yellowish hairs; flagellum dull testaceous beneath; thorax densely punctured, clothed with a dense yellow-ochraceous pubescence, longer and paler on metathorax and pleura; tegulæ honey-yellow; wings short, hyaline, nervures and stigma blackish; legs clothed with ochraceous pubescence, long and dense on posterior tibiæ and tarsi, apex of the latter pale ferruginous; abdomen shining at base, finely punctured, first segment clothed at base with long ochraceous pubescence, the second and three following segments with very short yellowish-brown pubescence, pale in certain lights and longer on the sides, apical margin of these segments with a rather broad band of short dense appressed pale ochraceous pubescence, in some specimens, where the segments are more distended, the third and fourth segments have each a narrow band of pubescence of same color at base, apical segment with longer dense ochraceous pubescence, the disk broad and flat, rapidly narrowed to apex which is rounded; ventral segments with a band of dense yellowish-ochraceous pubescence. Length .45 inch.

Five specimens. (Belgrave.) Rather smaller than *enavata*, with longer antennæ, punctured head and thorax, and differently ornamented abdomen, with the disk of the apical segment much broader and rounded at apex.

Melissodes pennsylvanica.

Macrocera pennsylvanica, St. Farg. Hym. ii., p. 97.

Four ♂ ♀ specimens. (Belgrave.)

Melissodes brevicornis, n. sp.

♂.—Black, densely punctured; head clothed with a dense ochraceous pubescence, paler on face and cheeks, short on clypeus and labrum which, with base of mandibles, are pale yellow; antennæ short, scarcely reaching beyond tegulæ, pale fulvous, more or less dark above, scape beneath pale yellow; thorax clothed with a very dense fulvo-ochraceous pubescence, paler on metathorax and thin on disk of mesothorax and scutellum; tegulæ pale fulvous; wings rather short, hyaline, slightly tinged with yellowish, apex faintly dusky, nervures and stigma fulvous; legs brown black, clothed with yellowish-ochraceous pubescence, tibiæ and tarsi more or less fulvous; abdomen closely and finely punctured, first segment except apex thickly clothed with a long ochraceous pubescence, narrow basal margin of second segment, sometimes obsolete, and broad apical margins of second to fifth segments clothed with a short, dense, appressed, pale ochraceous pubescence. Length .38—.46 inch.

Three specimens. (Belfrage.) A handsome species, remarkable for the short antennæ.

Melissodes albata, n. sp.

♀.—Robust, black; head and thorax clothed with a dense white pubescence, slightly tinged with yellowish on thorax; clypeus densely punctured, almost entirely nude; antennæ short, flagellum pale brown beneath; tegulæ honey-yellow; wings remarkably short, hyaline, nervures fuscous, costa honey-yellow; legs clothed with white pubescence, that on coxæ beneath and tips of tibiæ yellowish, that on tarsi within fulvous, tip of the latter pale ferruginous; apical margin of abdominal segments dull testaceous, the first segment except apex clothed with a moderately long erect white pubescence, the remaining segments covered with a dense, appressed, satiny-white pubescence, apex tinged with fulvous, disk of apical segment broad and rounded at apex; venter clothed with brown-fulvous pubescence. Length .48 inch.

♂.—Closely resembles the ♀, but is smaller, narrower, the face densely pubescent, the clypeus, labrum and base of mandibles pale yellow, and the antennæ longer than head and thorax; otherwise like the ♀ except the usual sexual characters. Length .35 inch.

Three specimens. (Belfrage.) Very distinct by the white pubescence, that on abdomen having a satiny or silky lustre.

Melissodes ? ursina, n. sp.

♂.—Black, shining, clothed with a dense ochraceous pubescence; vertex smooth, shining, impunctured; antennæ short, not reaching beyond tegulæ, entirely black; thorax very densely pubescent, that on mesothorax tinged with fulvous; tegulæ piceous; wings subhyaline, apical margins broadly dusky, neuration as usual in *Melissodes*; tibiæ and tarsi densely clothed with ochraceous pubescence, long on two posterior pairs, the femora and tibiæ of which are incrassate; abdomen oblong, convex, shining, thickly and uniformly clothed with ochraceous pubescence, which is longer on basal and apical segments and on lateral margins of segments 2—6. Length .48 inch.

Four specimens. (Belfrage; Boll.) Differs from *Melissodes* by the dense villosity of the whole body, by the short antennæ of ♂ and by

the incrassate legs, the posterior pair of which in ♂ have the pubescence nearly as long and dense as in the ♀ of a true *Melissodes*.

Melissodes? densa, n. sp.

♂.—Differs from the preceding species only by the pubescence being of a pale ochraceous color, and that on abdomen less dense. Length .45 inch.

Five specimens. (Belfrage.) It may be that these will prove to be merely faded specimens of *ursina*, although the color is very different and constant in each species.

Melissodes? marginella, n. sp.

♂ ♀.—Robust, black; head clothed with a dense fulvo-ochraceous pubescence, pale on cheeks and slightly mixed with black on vertex and occiput; mandibles narrow, piceous; antennæ alike short in both sexes, the flagellum brownish beneath; mesothorax, postscutellum, metathorax and sides of pleura immediately beneath wings clothed with short dense cinereous pubescence slightly tinged with ochraceous anteriorly; an arcuate line of black pubescence extending from tubercles, around in front of tegulæ, to lateral middle of mesothorax where it is broad or dilated; postscutellum and pleura beneath also clothed with black pubescence; tegulæ piceous; wings subhyaline, neuration as usual in *Melissodes*; legs clothed with sooty pubescence, pale on anterior pair, long on posterior tibiæ and base of tarsi of ♀, posterior femora and tibiæ of ♂ incrassate, tips of tarsi pale ferruginous; abdomen short, broad, clothed with a very short black pubescence, that on base and sides of first segment pale, that on apical margins of segments 2—4 of ♀ and 2—6 of ♂ narrowly and evenly ochraceous, apex of ♀ with longer black pubescence, the disk of apical segment narrow and obtusely pointed at apex. Length .45—.50 inch.

Eight specimens collected in Comal Co. This species in congeneric and closely allied to the *Anthophora taurea* of Say, from which it is distinguished by the pubescence of the head being fulvo-ochraceous instead of cinereous, and by the narrow apical bands of the abdomen being ochraceous instead of white; the thorax of the two species are similarly ornamented. *Marginella* is also found in Mexico.

Anthophora Smithii.

Anthophora Smithii, Cress. Trans. Am. Ent. Soc. ii., p. 290.

Two ♀ specimens. (Belfrage.)

Anthophora texana, n. sp.

♀.—Black; sides of face and cheeks clothed with long dense white pubescence, that on vertex and occiput ochraceous, slightly mixed with black about ocelli; clypeus closely punctured, with a smooth central ridge; mandibles yellowish toward apex; thorax clothed with a long dense pubescence, that on mesothorax and scutellum ochraceous and slightly mixed with black, that on metathorax and pleura white; tegulæ testaceous; wings short, hyaline; legs brown, clothed with whitish pubescence, tarsi testaceous, claws black; abdomen broad ovate, thinly clothed with a pale pubescence, long and dense on sides of first segment, apical margins of segments 1—4 rather narrowly white,

slightly sinuate on each side anteriorly, apex of fifth segment clothed with a dense black pubescence, the sides with long white hairs. Length .45 inch.

One specimen. (Coll. G. W. Belfrage.) Allied to *californica*, Cress.

Anthophora bomboides.

Anthophora bomboides, Kirby, Faun. Bor. Am. iv., p. 271.

One specimen. (Belfrage.)

Anthophora abrupta.

Anthophora abrupta, Say, Bost. Journ. Nat. Hist. i., p. 409.

Anthophora sponsa, Smith, Brit. Mus. Cat. ii., p. 339.

One ♂ specimen. (Boll.)

Xylocopa virginica.

Apis virginica, Drury, Exot. Ins. i., p. 96, pl. 43, fig. 1.

Centris carolina, Fabr. Syst. Piez. p. 357.

Two ♂ ♀ specimens. (Heiligbrodt.)

Xylocopa texana.

♂.—Black; clypeus, spot above, and labrum yellowish-white, vertex clothed with black pubescence, cheeks with, and a tuft between insertion of antennæ of pale pubescence; thorax tinged with blue or green, clothed with a short dense pale ochraceous pubescence; tegulæ æneous; wings dusky, subviolaceous, fuscous on apical margins; legs blue or bluish-green, clothed with pale pubescence, posterior pair and tibiæ and tarsi of intermediate pair clothed with black pubescence, basal joint of posterior tarsi long, narrow, with a broad deep groove on outer side; abdomen green or blue-green, shining, finely punctured, subsericeous, first segment clothed with a short, rather dense pale ochraceous pubescence, two apical segments with rather long black pubescence, more or less mixed with pale ochraceous laterally, sometimes the apical margin of fourth segment is fringed with a short ochraceous pubescence. Length .80—.85 inch.

♀.—Black, the head broad, tinged with blue, clothed with short black pubescence, face and clypeus densely punctured, apical margin of the latter depressed, tinged with rufous, vertex and cheeks with large sparse punctures, a short, prominent, blunt tubercle between insertion of antennæ; thorax tinged with green or blue, clothed with a dense pale ochraceous pubescence, more or less mixed with black around the smooth polished disk of mesothorax; pleura beneath clothed with black pubescence; wings darker than in ♂; pubescence of legs entirely black; abdomen blue-green, polished, sparsely punctured, apex clothed with black pubescence, first segment and sides of apex with pale ochraceous pubescence. Length .80—.85 inch.

Five specimens. (Belfrage; Boll.) Quite distinct from *virginica* by the blue or green color and by the pale pubescence at apex of abdomen. In color it approaches *micans*, St. Farg., which is otherwise very different.

Xylocopa purpurea, n. sp.

♀.—Black, with a strong purple reflection, changing to blue and sometimes green in certain lights, especially on thorax and legs, the abdomen more strongly purple, the pubescence short, thin and black; face and clypeus closely punctured, the vertex sparsely so, especially at summit of eyes where there is an oblique indentation, frontal tubercle almost obsolete; cheeks with dense black pubescence; disk of thorax impunctured; wings smoky, dark at apex; pubescence of legs black; abdomen naked above, sparsely punctured, more closely so laterally, apex with black pubescence, having a tuft of white pubescence on each side. Length .75 inch.

Two specimens. (Heiligbrodt.)

Centris lanosa, n. sp.

♂.—Black; head, thorax and basal segment of abdomen clothed with a dense, rather long, ochraceous pubescence, whitish on face and cheeks; clypeus labrum and seape beneath yellow or yellowish-white, clypeus shining, feebly punctured; tegulæ pale testaceous; wings hyaline; legs robust, black, with black pubescence, the anterior pair and sometimes the four posterior tibiæ on outside with pale pubescence; abdomen shining, minutely punctured, with a slight bluish reflection, the segments except first, clothed with a short black pubescence. Length .50 inch.

Three specimens. (Belfrage.)

Apathus laboriosus.

Bombus laboriosus, Fabr. Syst. Piez., p. 352.

One ♀ specimen. (Boll.)

Apathus variabilis, n. sp.

♀.—Black, shining, clothed with short black pubescence; a triangular patch on vertex, mesothorax except posterior disk, scutellum except base and patch in front of tegulæ, clothed with dense citron-yellow pubescence; a slight admixture of yellowish pubescence before ocelli; wings dark fuscous, darker at base and along costa; legs and abdomen clothed with black pubescence, more dense at base of abdomen which is smooth and polished, being very minutely punctured, apex incurved and obtusely punctured. Length .75 inch.

♂.—The pubescence of head and thorax longer and brighter in color, that on thorax above interrupted by a band of black pubescence between the wings, dilated centrally, the yellow pubescence sometimes extending down on each side of pleura; legs sometimes tinged with ferruginous; abdomen sometimes entirely black except a few yellowish hairs on lateral margins of third and fourth segments, sometimes the third and fourth segments except disk and sides of fifth segment are yellow, sometimes the first and sides of fourth segments are more or less yellow and sometimes the first and third entirely, the second except sides, and the sides of fourth and fifth segments are yellow. Length .70 inch.

Five specimens. (Belfrage.) The ♀ differs from *laboriosus* ♀, by the black pleura and black band between the wings. The ♂

varies greatly in the coloration of abdomen, varying from almost entirely black to almost entirely yellow. It is allied to *insularis*, Smith.

Apathus elatus.

Apis elata, Fabr. Ent. Syst. Suppl. ii., p. 274.

Three ♂ specimens. (Belfrage; Boll.)

Bombus virginicus.

Apis virginicus, Oliv. Encyc. Méth. Ins. iv., p. 66.

Two ♀ specimens from Comal Co.

Bombus fervidus.

Bombus fervidus, Fabr. Syst. Piez., p. 352.

One ♀ specimen. (Belfrage.)

Bombus pennsylvanicus.

Apis pennsylvanicus, De Geer, Mém. iii, p. 575.

Bombus americanorum, Fabr. Syst. Piez. p. 346.

Sixteen ♂ ♀ specimens. (Belfrage; Boll; Heiligbrodt.)

Bombus scutellaris.

Bombus scutellaris, Cress. Proc. Ent. Soc. Phil. ii. p. 96.

Three ♀ specimens.

Apis mellifica.

Apis mellifica, Linn. Syst. Nat. ii., p. 955.

Six ♀ specimens. (Boll; Heiligbrodt.)

ERRATUM.

Page 174, line 19, before "large," insert "stigma."

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